DOCUMENT RESUME

ED 113 897 95 RC 080 251

AUTHOR Fain, Gerald S., Ed.; Burkhart, Ernie, Ed.

TITLE Motor Development: From Classroom to Playground.

INSTITUTION Maryland Univ., College Park. Coll. of Physical Education, Recreation, and Health.; Prince George's County Board of Education, Upper Marlboro, Md. Dept. of Special Education.

SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE), Washington, D.C.
PUB DATE Apr 75
GRANT OEG-0-73-7097

NOTE 180p.

EDRS PRICE MF-$0.76 HC-$9.51 Plus Postage
DESCRIPTORS Definitions; Exceptional Child Education; *Handicapped Children; *Motor Development; *Perceptual Motor Coordination; *Physical Development; Physical Education; Program Descriptions; Recreation; *Teaching Methods

ABSTRACT

Intended for the educator and recreator working with normal and exceptional children, the book provides an overview of perceptual motor terminology, development, and resources in addition to a state of the art paper. Presented are definitions of such terms as motor development, sensory motor development, and perceptual motor development. Developmental motor patterns are reviewed and activities used in the motor development programs of Prince George's County, Maryland, Special Education Department are listed. Described is the University of Maryland's Children's Health Developmental Clinic which incorporates parent education with individualized motor instruction for children with developmental problems. Among the reference materials and resource information provided are sample behaviors and activities to develop such skills as mature social interaction, personal fulfillment, and enhanced amusement; an annotated list of 178 references; and examples of on-going program approaches. In a concluding paper, J. Stein reviews relevant research, including findings about the specificity of learning, and their implications for the field. Appended is an annotated bibliography with approximately 50 references related to movement and learning. (CL)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED113897

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

MOTOR DEVELOPMENT: FROM CLASSROOM TO PLAYGROUND

Edited by

Gerald S. Fain
Department of Recreation
University of Maryland

and

Ernie Burkhart
Department of Special Education
Capitol Heights Resource Center

April 1975

Distributed without cost to interested professionals and students. This resource has been compiled with the intent of providing a useful reference.

EC 080 251

Published pursuant to a grant by the Bureau of Education for the Handicapped, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U. S. Office of Education, and no official endorsement by the U. S. Office of Education should be inferred.

OEG-0-73-7097 Project Number H0038 SP

ACKNOWLEDGMENTS

This resource book is a joint effort by the Department of Recreation, University of Maryland, and the Motor Development Program, Department of Special Education, Prince George's County. Special thanks is extended to Bob Janus who greatly facilitated this project.

Much of the information which is included was graciously provided by the Information and Research Utilization Center in Physical Education and Recreation for the Handicapped, which is sponsored by the American Alliance for Health, Physical Education and Recreation.

In addition, the contributions of Warren Johnson from his Children's Health and Developmental Clinic are most appreciated.

INTRODUCTION

The essence of this resource book is founded in two rather easily identified ideas. One is that quality motor development programs are essential to the growth and development of the young, and the second is that these programs should not be viewed as being the sole responsibility of the motor development specialist.

Motor development is an area of study and practice which is of fundamental importance to the growth and development of all of us. The notion of a relationship between our physical performances and the rest of our being is no longer conjecture, but well documented fact. Today, educators and recreators are aware that if children, and handicapped children in particular, are to actualize their maximum potentials, they must be provided with quality motor development programs.

These programs can be and should be provided for all youngsters. The research in this field clearly indicates that the positive gains a youngster can make in these programs contributes greatly to successes in other areas. This is to say that the gains a youngster may make on the playground do in fact contribute to the gains this child realizes in the classroom. There is more than a coincidental relationship between helping a child use his body and his mind. The awareness of body parts, or directionality, serves to illustrate this point.

In considering the idea of the role of the motor development specialist, there is but one point I feel it imperative to amplify. That is that motor development is not something which needs our attention for just one hour a week or even a day. It is far more important than that. To

fail to recognize the carryover that CAN take place between the classroom teacher and the recreator is to neglect our professional responsibilities to the child. There must be better and more frequent communication between what happens to a child in the classroom and on the playground. To spend time on a program and not communicate the goals, objectives and progress of the youngster to your professional counterpart is a tragic waste of our time, especially when we stop to consider the fabulous impact our joint efforts could have. Rather than flirting with the possibility that someone else could be undoing what we are trying to do, we would find that communication and coordination would, in the long run, save us time and energy and, most importantly, would benefit the youngsters we are most concerned with.

In essence, this resource book not only offers the reader the opportunity to learn more about motor development, but it should also serve as a workable model of the cooperation that must continue to occur between the related professions. Effective resource utilization is a goal we all must work toward. It is hoped that the information contained herein will facilitate that purpose.

TABLE OF CONTENTS

Introduction 1

CHAPTER I TERMINOLOGY

Terminology for Perceptual Motor Development by Richard Cobb 1

Terms 12

CHAPTER II AN OVERVIEW OF PERCEPTUAL MOTOR DEVELOPMENT by Dr. Kenneth R. Church 17

CHAPTER III SELECTED RESOURCES FROM:

Motor Development Programs
Special Education Department
Prince George's County Public Schools 26

CHAPTER IV SELECTED RESOURCES FROM:

Children's Health Developmental Clinic 50

CHAPTER V REFERENCE MATERIALS AND RESOURCE INFORMATION

Part One: Examples of Behaviors to be Developed and Suggestions for Physical and Recreational Activities 77

Part Two: Annotated List of References 85

Part Three: Resource Information Contacts 124

Part Four: Audiovisual Aids 126

Part Five: Examples of On-Going Program Approaches 130

CHAPTER VI THE STATE OF THE ART: DIRECTIONS FOR PRACTICE AND RESEARCH by Dr. Julian U. Stein 138

APPENDIX ANNOTATED BIBLIOGRAPHY RELATED TO MOVEMENT AND LEARNING

CHAPTER I

TERMINOLOGY

TERMINOLOGY FOR

PERCEPTUAL MOTOR DEVELOPMENT

by

Richard Cobb
Graduate Assistant
University of Maryland

A major problem confronting the neophyte in his attempt to understand and digest the literature regarding perceptual motor development is the lack of unification in definitions and terminology used. The purpose of this paper is to bring attention to the many and varied terms used to investigate the phenomena of perceptual motor development.

DEFINITIONS

Let us start with an attempt to explain the application of "labels." If the student of perceptual motor development is confused because of the various names associated with the same process or task, he has a right to be. Stein states, "the need is obvious for consistency in terminology and usage, especially when personnel from different disciplines are involved." (1:28)

The researcher engaged in the study of human movement has a problem when he attempts to examine the literature and the studies are listed under different names: motor learning, sensory motor learning (sensori-motor, sensori-neuromotor), psycho-motor learning (psychomotor), menti-motor learning (ideo-motor), neuro-muscular learning (neuromotor), perceptual motor learning (perceptomotor, visuo-motor, and tactual motor).

The question must be asked, "What do all of these terms imply?" Lockhart asks, "Why does one writer discuss 'sensory-motor learning' and another 'psycho-motor learning,' when each is referring to the same phenomenon." (14:9)

My purpose now is to distinguish among some commonly used terms. It must be stated that the distinctions drawn are not necessarily correct but rather the intent is merely to encourage and stimulate discussion. Possibly the day will arrive when agreement on usage and distinction will be commonplace.

Perception

Bartley defines perception as "the immediate discriminatory response of the organism to energy-activating sense organs." (4:11) The word "immediate" for Bartley is a relative term and "discriminating" is a choice reaction in which intellectual conditions play a deciding role. An example of a discriminating reaction is the difference between brightness, where the apparent brightness of a dish of light depends not only on target intensity but on the luminence of the area around it.

Perception may be defined as "an experience or sensation combined or integrated with previous experiences which give it added meaning." (13:136) Chaney and Kephart add a new dimension by incorporating "previous experiences" which were not mentioned in Bartley's definition.

Gibson talks of perception in a functional manner by saying "perception is the process by which we obtain first hand information about the world around us." (11:3) She states that there are two aspects of perception. First there is an awareness of events presently occurring in the organism's immediate surroundings. Secondly, there is a responsive aspect, which entails a discriminative selective response to the stimuli in the immediate environment.

According to Sage, there has been considerable confusion over the terms "sensation" and "perception." Historically speaking, perception was thought to be merely input to the brain, hardly different from sensation except that it was more complex. Sensation at one time was thought to be a simple element in awareness, while perception was a combination of such elements. Recent research in perception has made these notions obsolete. (16:68-69)

Sensation may be thought of as the various ways in which sensory systems function. Sensation is defined as "the activity of sensory receptors and the resulting afferent transmission." (16:68) Perception, on the other hand, "is

the activity of mediating processes which integrate present input with past input. It is one of the intervening variables between a stimulus and a response." (16:68)

Sage points out that sensation is a one-stage process that is not affected by learning. Perception, on the other hand, usually demands a sequence of stimulation. "It is influenced by many factors, including learning, and its relation to stimulating events is variable. The same stimuli can produce different perceptions and different stimuli can produce the same perceptions." (16:68)

Perception may be thought of as information coming in via the sensory systems and that this information is processed and translated to determine its relevancy to the situation at hand. (17:81-82) Singer also says that the major function of perception is to isolate selectively those stimuli of most consequence in a situation. Berelson and Steiner state that this process is dependent upon:

> a) the type of stimuli present; b) prior learning or experience as it influences the learner's 'set,' that is, his expectations; and, c) the motives of the learner in the situation, e.g. his needs and desires. (17:83)

The shortest definition of perception was offered by Robb. She simply states, "the term perception means the interpretation of sensory stimuli." (15:21)

Motor Development, Sensory-Motor Development, Perceptual Motor Development

These terms were grouped together because of their inherent similarity. They all pertain to a similar process and yet each denotes a slightly different response.

Seefeldt says that motor development "implies a sequential orderly progression in fundamental movement patterns." (1:20) Jumping ahead for a moment, neurophysiologists and neuroanatomists historically referred to the term

perceptual-motor as two systems, the motor system and the sensory system. Clifton states that really there is no justification for this separation and that you probably cannot get motor activity without the perceptual. (1:3)) In essence, one might think of motor development to be the same as perceptual motor development.

A point of interest with this interpretation of motor development is reflected by Getman in his discussion of the terms, sight, vision and motor development. Sight and vision are not synonymous according to Getman. Sight is "the response of the eye to light and its translation of this light into neutral signals," where as vision "is the response of the total organism -- the entire human body -- to the information being collected throughout the total organism as a result of the light impact." (1:25) Sight may be interpreted as the reception of light. Vision is the translation, utilization and integration of the information, followed by the action of the totality in its use of this information. At this point, Getman compares what optometrists call vision and what physical educators call motor development. He says, "we are, in effect, almost talking about the same thing?" (1:25)

Sensory Motor Development

Child development has been described in terms of developmental sequences, in that the child moves from systematic motor exploration through perceptual manipulation to cognitive operations. Sensory motor development takes place in the first state of systematic motor exploration. (13:23)

Richardson states,

> The child's earliest years involve sensory motor development, particularly during his first six years when the child is busy developing and refining skills to achieve mastery of his body as well as his environment. (1:17)

Piaget formulated a rather complex and flexible theory to explain the development of human intelligence. He divides intellectual development into

four major parts: sensory motor period, pre-operational period, concrete operational period and the formal operations period. What is important to this discussion is the sensory motor period. During this period of development, the child must use all of his senses to explore an object or a space. He learns to identify objects by touch, by feel, and by moving or manipulating. (8:79-85)

Sensory-motor development is viewed as that information which comes to us through the sensory systems. It is through the senses that we are informed about both the internal and external environment. Systematic movement depends upon the sensory input. Investigators interested in studying the function of sensory or detecting (such as auditory capacities and visual capabilities) are appropriately designated as sensory-motor.

Perceptual-Motor Development and, or Learning

Perceptual motor refers to how an individual reacts to his world. Described in terms of a process it includes input (sensory) and output (motor or muscular activities). To Chaney and Kephart, a division of the two is impossible, for anything that happens to one, automatically effects the other. They also state that the perceptual motor process involves a total activity including input, integration, output and feedback. (13:136)

We are continually striving to make sense out of our world, to find out what the sensory information means. Perception is the process of organizing and giving meaning to sensory input. Perception then helps to determine what responses we will make, thus effective movement is highly dependent upon perception.

The Task Force Symposium of 1968, in an effort to define perceptual motor development, offered this explanation by Cohen, one of its panelists.

> All those functions of the body that have a voluntary component and, of course, depend on some kind of sensory feedback and some kind of sensory perception prior to the motor act would fall into this category. It would be hard to think of a motor act that does not require either prior perceptual awareness of some kind of stimulation in the environment or at least require some kind of sensory feedback during execution of a motion. (1:33)

Clifton, in her response to this definition, chose to include a definition of the word development. She says it is conceived as an "increase in skill and complexity of function." (1:34)

Stein asks the question, "What is perceptual motor development?" He says there are seven things which are certain regarding perceptual motor development. The seven are:

1. Perceptual motor development involves many things and is not a single entity. It is not a single characteristic or ability.

2. Perceptual motor development is a way by which each individual organizes information about his past experiences in ways that can be applied meaningfully to himself.

3. Perceptual motor development is active in activity; it is not passive.

4. Perceptual motor development is a process whereby sensory information and cues are integrated as the individual performs meaningful tasks.

5. Perceptual motor development is exploration as the individual familiarizes himself with his world.

6. Perceptual motor development is a process of problem solving as the individual comes to grips with his environment.

7. Perceptual motor development makes things look the way they do to each individual. (1:28)

"Perceptual motor development means different things to different people," according to Stein. (1:29) He also states that perceptual motor development deals with highly specific functions and that it is very individual in nature.

Perceptual motor is sometimes discussed in terms of performance and learning. Performance may be thought of as a relative change in skill acquisition whereas learning is more permanent. Perceptual motor performance when referred to in research studies indicate a relative or temporary change in the perceptual motor process. The learning of a perceptual motor act implies a more permanent change not affected by the many intervening variables that occur in performance.

Motor Learning

The term motor learning refers to action investigated through the senses, integrated through the nervous system and modulated through the response mechanisms into controlled behavior. (17:1-10) Motor learning emphasizes organized motion, the executive expressions of organismic activity. There are many types of learning, and motor learning simply designates the type of learning we are talking about.

Teachers College, Columbia University, defines motor learning as "an area of study utilizing multi-dimensional analysis to understanding the nature of development, acquisition and performance of man's goal directed movements." (20:1) One can see from this definition that the term motor learning is not restricted by limitations and exclusions implied by the nomenclature of sensory motor, perceptual motor. It must be pointed out that this does not rule out the involvement of these terms in the total neuristic process of acquiring motor skills.

Menti-Motor

This term for the most part contrasts the mental factor with the physical, physiological and somatic. Menti-motor has been used in investigations where the primary consideration is the mental aspects and the motor being only a method of measuring results and inferring relationships. Generally this term is avoided today because it strongly suggests an obvious mentalistic concept

with the implication that the mind and body are not only separate but even antagonistic. This idea is currently in opposition to present day beliefs. (14:11)

Neuro-Muscular

Neuro-muscular seems to limit investigations merely to motor responses. According to Lockhart, "It too suggests the unhappy doctrine of physical-mental opposition." (14:11) The term appears to be too restrictive in that it does not include the complex interplay of all the sensory, perceptual, ideational and psychological variables which are simultaneously involved in gross motor learning. Although cortical activity leads to motor responses, it appears to cut off learning at the level of the spinal cord. (14:11)

Motor Readiness

Fait defines motor readiness as "the ability to learn a motor skill is influenced by the growth and maturation level of a child." (10:39) It seems obvious that a child cannot be expected to learn a specific motor activity until he has achieved the necessary physical growth to perform the movement required by the activity.

Motor readiness is also dependent upon the maturation of the neurological system. This maturation occurs in two ways: "(1) naturally as the child ages, and (2) as the result of certain experiences that he has." (10:40) It has been shown through research that certain kinds of motor skills cannot be learned, regardless of the amount of experience until a specific level of neurological maturation has evolved. On the other hand, it has been shown that a child who participates in a wide variety of activities has a greater possibility of learning a specific activity at an earlier age than one who has not had such experience. (10:40-41)

It was my intent to shed some light on terms that are basic to the perceptual motor field. Hopefully, a clearer understanding and justification for their use is made. Unfortunately, some authors and researchers use certain terms without much thought as to their exact meaning and as a consequence tend to confuse or mislead the neophyte reader in his interpretation of the result.

BIBLIOGRAPHY

1. American Association for Health, Physical Education and Recreation. Foundations and Practices in Perceptual Motor Learning--A quest for Understanding. Washington, D.C.: The Association, 1970.

2. American Association for Health, Physical Education and Recreation. Perceptual Motor Foundations: A Multidisciplinary Concern. Washington, D.C.: The Association, 1969.

3. Barsch, Ray H. Achieving Perceptual-Motor Efficiency. Seattle, Washington: Special Child Publications, 1967.

4. Bartley, Howard S. Principles of Perception. New York: Harper and Rowe, 1969.

5. Bell, Virginia L. Sensorimotor Learning. Pacific Palisades, California: Goodyear Publishing Company, Inc., 1970.

6. Costner, Clay. "Contributions to Thought on Physical Education by Selected Contemporary Educational Philosophers." Unpublished Doctoral dissertation, George Peabody College for Teachers, 1971.

7. Cratty, Bryant J. Perceptual Motor Behavior and Educational Processes. Springfield, Illinois: Charles C. Thomas, 1969.

8. Cratty, Bryant J. Physical Expressions of Intelligence. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

9. Cratty, Bryant J. Teaching Motor Skills. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973.

10. Fait, Hollis F. Special Physical Education. Philadelphia: W. B. Saunders Company, 1972.

11. Gibson, Eleanor J. Principles of Perceptual Learning and Development. New York: Meredith Corporation, 1969.

12. Kenyon, Gerald S. and Tom M. Grogg, Editors. Contemporary Psychology of Sport. Chicago, Illinois: The Athletic Institute, 1970.

13. Kephart, Newell C. and Clara M. Chaney. Motoric Aids to Perceptual Training. Columbus, Ohio: Charles Merrill Company, 1968.

14. Lockhart, Aileene. "What's in a Name?" Quest, Monograph II, 1964.

15. Robb, Margaret D. The Dynamics of Motor Skill Acquisition. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

16. Sage, George A. Introduction to Motor Behavior--A Neuro-psychological Approach. Reading, Massachusetts: Addison-Wesley Company, 1971.

17. Singer, Robert N. Motor Learning and Human Preference. London: MacMillan Company, 1968.

18. Singer, Robert N. The Psychomotor Domain: Movement Behavior. Philadelphia: Lea and Febiger, 1972.

19. Singer, Robert N. Readings in Motor Learning. Philadelphia: Lea and Febiger, 1972.

20. Teachers College, Columbia University. "Graduate Program in Motor Learning and Biomechanics," Monograph, 1973.

TERMS USED IN MOVEMENT EXPLORATION

1. Agility - one's ability to move his body through space and change direction.

2. Balance - equality in weight. Use to pinpoint the center of gravity of the body.

3. Conceptualization - the ability to anticipate needs or consequences in a given problem situation, an understanding of the proposed problem.

4. Coordination - synchronized movement patterns.

5. Crossing-Over - crossing the mid-line or center line of the body with the body extremeties or with eyes.

6. Directionality - by experimenting eith movement patterns directed toward objects in space, the child learns that to reach an object he must make a movement, for example, to the right, up, down, etc.

7. Dominance - preferred side (hand, foot, eye, ear) determined by cortical development.

8. Fine Motor Skills - smaller and more specialized muscle activity.

9. Flexibility - ability to increase the range of motion at a given point.

10. Gross Motor Skills - large muscle activity (running, jumping, etc.).

11. Kinesthetic - the sense of muscular activity. The sensations caused by stimulation of sensory-end organs in the muscles and joints.

12. Laterality - concept of left and right sidedness and the ability to control the sides of the body separately and simultaneously.

    Bi-laterality - both arms or both legs moving simultaneously.
    Cross-laterality - opposite arm and lef moving simultaneously.
    Homolaterality - same leg and arm moving simultaneously.
    Multi-laterally - both arms and legs moving simultaneously.

13. Locomotion - movement of the body through space.

14. Mid-line - vertical center line of the body. Children develop from the mid-line of the body out, and from head to foot.

15. Motor-Educability - a capacity to learn.

16. Motor Fitness - capacity to perform.

17. Motor Perceptual - experimental background of movement exploration. (Time and space).

18. Motor-sensory - muscular sensitivity to an object. Stimulus received upon sense organs and receptors which cause muscular behavior from reflexive to controlled behavior.

TERMS (Continued)

19. Neuromuscular - relationship of the nerves to the muscles, the development which depends upon the quality and quanity of use.

20. Patterning - sequential, neuromuscular development.

21. Perceptually Handicapped - lack of purposeful motor activity due to the inability to organize and interpret a situation based on sensory stimulation.

22. Rating Scale - an instrument to determine the performance of a child to permit this observation of perceptual motor behavior.

23. Spatial Orientation - relationship between self and outside objects and between objects. Must have a point of reference to stabilize functions and put outside object into a proper perspective.

24. Strength - the ability to do work, the ability to move against or withstand resistance.

TERMS USED IN PERCEPTUAL MOTOR LEARNING

Auditory - of or relating to hearing.

Bilateral - pertaining to the use of both sides of the body in a simultaneous and partial fashion.

Biocular - use of both eyes simultaneously.

Body Image - complete awareness of one's own body and its possibilities of movement and performance.

Concept - knowledge that at the moment need not be directtly perceived through the senses but is the result of the manipulation or previously stored sensory impressions. A concept requires abstraction (the ability to recognize that the same "tag" or name may be used for several different objects). Example - our abstract knowledge tells us that a particular grouping of legs, seat, and back is a chair - the power to generalize lets us recognize that there are many types of chairs.

Cross-lateral movements - movements requiring the simultaneous use of different limbs on opposite sides of the body or the moving of the same limbs (as both arms) simultaneously but in opposite directions.

Differentiation - the ability to sort out and use independently different parts of the body and in a specific and controlled manner.

Directionality - the projection of right and left, up and down, fore and aft, and directions from the body out into space. The child must develop laterally within his own organism and be aware of the right and left sides of his own body before he is ready or able to project these directional concepts into external space.

Elaboration - embellishment by the addition of associated ideas or movements.

Experimentation - the ability, desire and willingness of the child to try or test newly learned movement or task to see how many different ways it can be used of itself or in correlation with movements or tasks.

Fine Motor Activities - activities or output in which precision in delicate muscle systems is required.

Form Perception - the ability to conceive form in all its parts, put it together as a whole unit then again break it down into individual parts.

Generalized Movements - a wave of movements that sweeps through the whole body. Parts such as arms and legs are moved, not in relationship to their function but only as an adjunct to the total movement.

TERMS (continued)

Gross Motor Activity - activities or output in which groups of large muscles are used and the factor of strength is primary.

Handedness - the choice of hand or side that is to lead in all activities. True handedness grows out of laterality, the inner knowledge of the two sides of one's body and the ability to call from the one needed for a prescribed task.

Integration - the pulling together and organization of all of the stimuli which contact the organism at a given moment. It also involves the tying together with the present stimulation experience variable retained from past activities. The organizing of many individual movements into a complex response.

Kinesthetic - the sense that yields knowledge of the movements of the muscles of the body and position of the joints.

Laterality - complete awareness of the two sides of the body and the ability to use them separately or both sides together as the task demands.

Midline - the child's own center of gravity. Unless he has a well-defined midline as the result of well-developed laterality, his space structure will not be stabilized and he may have difficulty orienting himself to his surroundings.

Monocular - the use of one eye.

Movement Patterns - the organization of sinle movements into complete wholes. The movement pattern allows the child to concentrate on the purpose of the movement rather than how the movement can be made.

Ocular - having to do with the eyes.

Orientation - the child's ability to locate himself in relation to the things surrounding him and/or to time.

Perception - an experiense or sensation combined or integrated with previous experiences which give it added meaning. Perception is controlled by stimuli received, memory, and motivation. Input.

Perceptual Motor - the perceptual motor processincludes input (asensory or perceptual activity) and output (motor or muscular activities.) A division of the two isimpossible for anything that happens to one area automatically affects the other. Any total activity includes input, integration, output and feedback.

Proximo-distal - the direction from the center outward. Movements of lagge muscle groups lying toward the cneter of the Body develop before the independent movements of parts lying at the extremity. Thus movements of the total arms precede those of the wrist and fingers.

TERMS (continued)

Readiness Skills - those skills which the small child is expected to develop one way or another and bring with him to "tackle" the the first grade.

Space - the area in which the child exists and moves

Tactual - having to do with the sense of touch

Unilateral - one sided.

Vision - the interpretation and analysis of what is seen. Vison then, is the interpretive process that results from sight, and many authorities call this the act of perception. It certainly may be called perception as long as one realizes it cannot arise strictly from the sight response.

CHAPTER II

AN OVERVIEW OF

PERCEPTUAL-MOTOR DEVELOPMENT

by

Dr. Kenneth R. Church
Department of Physical Education
University of Maryland

Perceptual-motor competency requires the interaction and integration of two systems; the sensory system which provides input from the environment to the individual, and the motor system which allows for output or a response from the individual to his environment. Many professional people believe that the integration of these two systems and the development of perceptions is necessary for higher learning processes to occur. The correlation of movement and the ability to read, write, speak and spell are related in that the ability to generalize in higher mental processes grows out of and has its foundations in the ability to form motor generalizations. The child's first learnings are motoric and only after he has mastered these basic skills can he progress to language and then to academic and achievement skills.

> The perceptual-motor educational concept is based on the theory that correlation of movement is centered in the brainstem and that reading, writing, spelling, and speech are controlled by this area of the neurological system. If the child has good perceptual-motor skills, then the motor-neural system has matured and developed to the point where it is not a negative factor in the learning process. Conversely, the theory holds that a child with deficient perceptual-motor development will exhibit disability or fail to reach the proper potential in one or more of the areas of reading, writing, spelling and speech. (8-p. 119)

This theory has not been proved scientifically but there is some agreement among educators that perceptual-motor activities can and do help children learn. Despite the fact that there is no evidence to substantiate the theory fully, perceptual-motor activities are used with both regular and special children because of the success so many educators have seen with them. Cratty believes "that these kinds of activities, if properly applied, can have a greater impact upon the learning of normal and atypical children than was believed possible in the past." (6-p. 78) Perceptual-motor programs are used to remediate difficulties

and deficiencies in special children but can also be of value in developing skills with normal children. The program should be developmental and should include a wide variety of activities including eye-hand and eye-foot coordination, balance beam work, locomotor skills, body image, laterality (unilateral, bilateral, and cross-lateral), directionality, spatial awareness, and other specialized activities. These activities are more effective when initiated in pre-school or the early primary grades, as children younger than eight or nine years old will profit most from them. These activities are the basic building blocks for all the child's motor skills that will be learned later. Generally, the younger the child, the more he will profit from perceptual-motor activities. It should be stressed that perceptual-motor competency does not end with formal exposure to a unit but is continually being developed and refined throughout the child's school years.

The teacher will need to be alert to the needs of children with poor or deficient perceptual-motor development and be able to readily identify them and implement diagnosis and remediation if necessary. A child with deficient perceptual-motor development may exhibit any of the following symptoms:

1. trouble maintaining balance
2. obvious dominance on one side of the body to the detriment of opposite side
3. poor left-right discrimination
4. may not be able to hop or skip successfully to their age level
5. poor spatial orientation (i.e., disorientated, clumsy)
6. poor temporal orientation
7. poor eye-hand and/or eye-foot coordination

Children with motor problems should be identified as early as possible for successful remediation. This can be done through direct teacher observation or through a screening test or survey such as Kephart's Purdue Perceptual-Motor Survey. The survey has two measures; specific performance tasks and the child's confidence while doing the tasks. The specific tasks include directionality, laterality and eye-hand and eye-foot coordination. The test can be used as a screening device or can be administered before perceptual-motor work and again later to evaluate the child's progress.

Before more specific motor experiences can be achieved, body awareness is necessary. This is usually done in kindergarten, first and second grade by identification of body parts. The teacher may call out body parts which the children must identify by pointing to the body part, by touching it with the hands or both. Another good way to identify body parts is through shadow play where the child uses his shadow in identification. Merely watching one's own shadow on a wall or on the blacktop is a good starting point for this.

Identification of body parts is just one aspect of a child's body image which is another component of body awareness. Body image is "the perception that a child has of the relation of his body parts and the relationships his body has to external objects." (2-p. 54) Components of body image according to Kephart and Barsch are:

1. Kinesthetic motor awareness (of his motor capabilities and ability to assess and interpret motor responses)
2. Laterality (awareness of two sides of the body)
3. Verticality (awareness of the vertical components of the body)
4. Directionality (ability to relate the objects and space in relationship to the body)

The trampoline is a good way to develop body image by incorporating laterality, verticality and kinesthetic motor awareness into the activities. The trampoline enables the child to perceive body position in relationship to gravitational forces. The balance beam is one of the best methods to achieve and/or improve a child's laterality. (Successful verticality promotes accurate assessment of objects along a vertical axis.)

Once the child has a firm body image and laterality, his basic coordination must be improved upon in order for him to contribute good coordination to his perceptual-motor competency. Good coordination requires agility, proper sequential arrangement of muscular movement, proper timing, rhythm and balance is also important.

A good technique for developing coordination with children is similation of animal walks. With these, the child is free to use his imagination to initiate a Bear Walk (right arm and leg move together), Lame Dog (two arms and one leg), Bunny Hop, Frog Jump, Duck Walk, Inchworm and so on. After the child becomes more skilled at these, the imitation walks can be put into relays. Other coordination activities include zig-zag runs, foward and backward rolls, and log rolls (simple tumbling stunts). Moving to music is a good technique in helping children move with rhythm and creativity.

To help the child develop body awareness, alertness, and bilateral, unilateral, cross-lateral movements, many professionals use "Angels in the Snow," an activity adapted from Kephart's Purdue Perceptual-Motor Survey. The child lies on his back with his arms at his side and his feet together. The teacher gives a series of commands which the child must follow when the teacher says "move." Bilateral movements include:

both arms overhead, both feet apart, and both arms and legs apart. Unilateral movement includes one arm out to the side and left arm and left leg out to the side together. An example of a cross-lateral movement is to move the right arm and left leg out to the side at the same time. These activities can also be done standing. In this position a bilateral movement would be moving forward with both feet (jump). Jumping jacks could also be included. A unilateral movement would be to move with the right arm and leg forward together. Children can march like wooden soldiers to further develop unilaterality. Cross-lateral movements can also be incorporated into these activities.

Another good technique for bilateral, unilateral, and cross-lateral movements is the imitation of movements. This should include a mixture of movements which the child must follow. All movements should begin to the side first and then later forward and backward movements can be added. Games in this include "Simon Says" and "Follow the Leader."

Balance beam work is excellent for helping the children to enhance coordination, balance, good postural habits and unilaterality, bilaterality and cross-laterality and directionality. Parachute play is good in helping children to improve their spatial awareness.

Dauer (1972) contends that the distinction between regular and special perceptual-motor activities is somewhat nebulous. Any activity which is valuable for children with perceptual-motor problems will probably be valuable in the regular perceptual-motor program. The activities which are scheduled into the regular program and those that are scheduled into the special program are often a matter of the individual physical educator's choice. The following five activities are some of the special activities he suggests that may be used to both regular and special programs:

1. Blast-Off Launcher

   This activity is used to develop foot-eye coordination. The child puts a beanbag on the launch pad and by stamping his foot at the end of the launcher, propels the beanbag through the air.

2. Baseball Rebound Net and Stand

   A rebound net frame of the type used for basketball practice is used with beanbags or balls to develop eye-hand coordination. The child tosses or throws the beanbag or ball against the net from which it is rebounded back to the child.

3. Balloon Keep-It-Up

   This activity develops ocular tracking and spatial orientation. The child must keep one or more balloons up in the air with a wand.

4. Stepping Stones

   A number of two different colored tiles are used in this activity to help develop eye-foot coordination and left-right discrimination. The tiles are arranged in various ways as the child steps on different patterns. With his right foot the child steps on one colored tile and with his left foot, the other colored tile. After the child develops some skill with this, more difficult patterns are laid out.

5. Floor Ladder Activities

   In this activity a ladder is placed on the floor with mats underneath it. The child performs from one end of the ladder to the other. Various activities include: walking, hopping, running, jumping between the ladder rungs, walking on the ladder rungs, or a free choice of movement.

Other activities which help to develop eye-hand coordination are throwing and catching. Have the child throw and catch various size balls, starting with the largest size and working through the smallest size. Bowling also helps to develop eye-hand coordination as the child aims and rolls a ball towards the wooden pins which are set up on the gym floor. Games such as jacks, pick-up sticks and block building are also helpful.

Kicking and trapping are aids in the development of eye-foot coordination. Have the child kick and stop a ball using his feet only. The ball in the circle exercise can also be used in developing eye-foot coordination. With this, a number of circles are drawn on the floor. Various size balls are presented to the child and he must select one and using only his foot, must maneuver the ball into a circle. With some practice, the children may have relays with this using the same size ball. Another activity is to have the child step on foot-prints which the teacher has secured on the floor. Stepping out of tires and/or hoops also helps the child develop good eye-foot coordination.

The obstacle course is an excellent culmination activity for perceptual-motor work. The course should include a wide variety of skills, such as climbing over, under, and through obstacles, balance beam work, rolling, directionality, eye-hand and eye-foot coordination, hopping, skipping, and jumping, and ladder work.

Activities are now being added to the physical education programs which directly correlate to what is being done in the classroom. An example of this is in reading readiness. If a child is to discriminate and recognize letters, he must first recognize basic shapes since letters are composed of triangles, circles, half circles, squares, and

various combinations of these shapes. Children start by identifying these shapes in the classroom and then go to the playground where these basic shapes have been painted. The children play on the shapes, walk around them, and identify them. Afterwards the children return to the classroom where letters are made from these shapes. The triangles become "A's," half-circles, "c's," and with the addition of a straight line, "D," and so on.

For spelling, square grids are placed on the playground with letters inside. By walking, hopping, and skipping, the children travel through the squares and enhance their ability to spell. Basic concepts in numbers and arithmetic can also be taught this way. Sequential memory is increased as children travel through two-dimensional obstacle courses, comprised of the various shapes, letters or numbers, where they must remember and combine steps to complete a specified task. Evaluation is made simplier as the teacher can directly observe the child's progress.

There are many perceptual-motor activities which can be used once the basic concept of the activity and the outcome is understood by the teacher. Perceptual-motor development will begin with these activities but will be further developed and refined throughout the child s later school years.

BIBLIOGRAPHY

1. Anderson, Marion H. Play with a Purpose, N.Y., Harper and Row, 1966.

2. Arnheim, Daniel D. Principles and Methods of Adapted Physical Education. St. Louis, Mosby Co., 1973.

3. Barsch, Ray H. Achieving Perceptual-Motor Efficiency. Seattle, Washington, Special Child Publications, 1967.

4. Cratty, Bryant J. Movement Activities, Motor Ability and the Education of Children. Springfield, Ill., Charles C. Thomas Publisher, 1970.

5. Cratty, Bryant J. Movement Behavior and Motor Learning. 2 ed. Philadelphia, Lea and Febiger, 1967.

6. Cratty, Bryant J. Perceptual-Motor Behavior and Educational Processes. Springfield, Illinois, Charles C. Thomas Publisher, 1969.

7. Dauer, Victor P. Dynamic Physical Education for Elementary School Children. Minneapolis, Minn., Burgess Publishing Co., 1971.

8. Dauer, Victor P. Essential Movement Experiences for Preschool and Primary Children. Minneapolis, Minn., Burgess Publishing Co., 1972.

9. Drowatsky, John N. Physical Education for the Mentally Retarded. Philadelphia, Lea and Febiger Publishing Co., 1971.

10. Godfrey, Barbara B. Movement Patterns and Motor Education. N.Y., Appleton-Century-Crofts, 1969.

11. Mueller, Grover W. Remedial Physical Education. Philadelphia, Lea and Febiger, 1967.

12. Myers, Patricia I. Methods for Learning Disorders. N.Y., John Wiley and Sons, 1969.

13. Wheeler, Ruth H. Physical Education and the Handicapped. Philadelphia, Lea and Febiger, 1969.

CHAPTER III

Selected Resources from:

Motor Development Programs
Special Education Department
Prince George's County Public Schools

MOTOR DEVELOPMENT AREA

1. Goals:

Development and improvement of locomotor behaviors. (walking, running, hopping, etc.)

Development and improvement of basic axial behaviors. (twisting, stretching, etc.)

Development of a more efficient sensory-motor integrative system.

Development of a greater facility of perceptual motor behaviors.

Development of greater facility in psycho-motor behaviors.

Development of greater facility in cognitive behaviors utilizing a movement modality.

Development and refinement of communication skills utilizing a movement modality.

Improvement of general physical health and appearance.

Development of greater degrees of acceptance and belonging as an individual through his participation and contribution to group social-recreational situations.

2. Experiences Planned:

Physical Fitness Experiences: Among the many definitions of physical fitness, the following one has been functional and practical and is applicable to the handicapped child: "a state in which the individual possesses the qualities of strength, power, agility, flexibility, endurance, balance, speed and general coordination to the extent that he is able to meet his everyday needs and emergency situations adequately.

Motor Ability Experiences: Attention must be given to the development of simple and fundamental movement and basic motor patterns in children with assessed motor attribute deficits. The totality of the individual cannot be overlooked in considering motor development; motor learning is not achieved in isolation, for the total being is involved in situations which relate to motor patterns and skills.

Sensory-motor and Perceptual-motor Activities leading to experiences combining movement and the opportunity to use the other sensory modalities of vision, audition, kinesthesia, proprioception, and touch.

Sport Skill Experiences: Recreational and sports activities to improve motor skills.

Diagnostic Experiences:

a. Screening
b. Testing
c. Prescribing

CHARACTERISTICS OF A MOVEMENT EDUCATION PROGRAM

The characteristics to which a comprehensive movement education program addresses itself are:

1. The attributes of movement --

   coordination
   balance
   agility
   flexibility
   endurance
   speed
   strength

2. Body Image (laterality) and the spatial relation of body to movement.

3. Attention: concentration

4. Control, including reaction time.

5. Creativity

6. Planning, visualization (imagery) and self-direction.

7. Associative abilities involving input and express, including the ability to follow direction (auditory-motor association).

8. Associative abilities involving two or more sense modalities, for example, kinesthesia and vision in any task requiring eye-motor coordination, or vision and hearing and kinesthesia when imitative movements are performed to the accompaniment of music or a percussion instrument.

9. Keeping several ideas (bits of information) in mind simultaneously while performing a movement.

10. Memory for sequential movements; awareness of objects (animate or inanimate, moving or stationary).

(Frostig)

MOTOR CHARACTERISTICS (Gessell)

MOTOR

3 Years

-standing requires little conscious effort;
-can easily maintain his equilibrium with heels together;
-runs and plays games with abandonment;
-can erect himself from squatting and balance himself momentarily on his toes;
-30 months attempts to stand on one foot and at 36 months can hold this position for two seconds without help;
-postural control so well developed that he can take walking and running steps on his toes, can walk a straight line, can walk backward a long distance;
-is bold enough to attempt steps on the 6 cm. walking board;
-he can jump down from an 8" elevation and leap off the floor with feet together;
-can catch a large ball with his arms extended forward stiffly;
-can throw without losing his balance.

4 Years

-he has now acquired strength, ease and facility in the use of his legs which lend grace to his movements;
-rapidly becoming athletic and takes pride in attempting motor atunts requiring delicate balance
-can maintain his balance on one foot for four to eight seconds and even longer
-can carry a cup of water without spilling it
-can jump down twenty-eight inches with feet together
-can walk the 6cm. walking board part way before stepping off
-can crouch for a high jump of two inches and a broad jump of 8 to 10 inches
-can hop on his toes with both feet off the ground at the same time, 7 or 8 times in 5 seconds
-can also catch a large ball with the arms flexed at the elbows and even move the arms in accordance with the direction of the ball
-beginning to assume an adult stance in throwing

5 Years

-now quite adept in execution of complicated synergic muscular activities
-exhibits a greater ease in the control of general bodily activity and exercises less caution than at 4 years
-indications of his mature sense of balance are seen in his ability to stand indefinitely on one foot and to balance on his toes for several seconds
-can hop a distance of 16 feet and walk long distances on his tiptoes
-assumes the adult posture in throwing for distance

Motor Characteristics (continued) (Gesell)

6 Years

__can stand on each foot alternately with his eyes closed
__can bow three times successively and gracefully with the heels together
__can jump down from a height of 12 inches, landing on his toes only
__can hop 50 feet in 9 seconds and make a standing broad jump of about 38 inches and a standing broad jump of 8 inches

7 Years

__less brisk than at 6 but has sudden spurts of very active behavior
__more cautious in his approach to new performances
__shows a new awareness of heights and is cautious in climbing and when playing in a tree house
__repeats a performance over and over to master it
__may have "runs" on one type of activity and then suddenly drop it for another
__interest in piano or dancing lessons; has strong motor component
__motor demands may be real need but, as with other activities, he may lose interest suddenly
__exhibits extremes in his outdoor play
__boys especially interested in acquiring ability to use a bow and arrow and a bat and a ball -- bot skills require a new orientation to the side position
__carpentry is a favorite occupation and he likes to tug and pull as he saws a board
__girls busy with jump rope and hop scotch but also find time to play house or pick flowers
__favorite posture, especially of boys is to lie prone on floor; resting on one elbow and activating the legs while reading, writing or working
__grasp though tight, releases suddenly causing many "drops"

8 Years

__bodily movements are fluid and often graceful and poised
__walk is free
__is aware of his own posture and remembers to sit upright on occasion
__ready to criticize others who do not satisfy his standards
__likes to dramatize and express himself in a variety of postures and gestures
__does stunts and enjoys a game of follow the leader
__is on the go -- runs, jumps, chases, and wrestles
__hide and seek is favorite pastime but is ready for organized sports such as soccer and baseball
__good spectator as well as performer
__courage and daring are characteristics; climbs trees, walks a plank

Motor Characteristics (continued) (Gesell)

__he may verbalize his fear but with encouragement will accomplish
__he is more responsive to learning new techniques
__new enjoyment in skating, jump rope and swimming
__goes his own way after trying yours

9 Years

__works and plays hard
__more skillful in his motor performances and he likes to display his skill
__his timing is also under better control
__he now shows great interest in competitive sports such as baseball
__boys quick to assume an active fighting posture and they strike out at each other and wrestle
__frequently "lets off steam" or make a wild rush toward something
__nine is apt to overdo
__has difficulty calming down after recess or after a strenuous game
__is apt to ride his bicycle to far or to mow the lawn until exhausted

10 thru 13 Years

__rapid growth; age of puberty; girls in advance of boys by one or two years
__maturation levels vary between girls and boys and between individuals
__endurance decreases
__danger of over fatigue
__individuals differ in maturation of special sense organs
__greater variability in muscular control
__rapid growth of long bones
__girls interested in personal appearance and in boys
__boys more interested in approbation of other boys than in girls
__increased interest in competitive activities
__establishment of group loyalty; hero worship
__decided physical and mental changes
__increasing power of attention and abstract reasoning

SIXTEEN DEVELOPMENTAL STEPS IN THE FORMATION OF THE BODY IMAGE AND THE BODY'S POSITION IN SPACE

1. IDENTIFICATION OF BODY PLANES (FRONT, BACK, SIDES, TOP, BOTTOM)

   a. Touch the front of your body.
   b. Touch the top of your head.
   c. Touch your side.

2. BODY PLANES IN RELATION TO OBJECTS

   a. Touch the wall with your back.
   b. Lie on the mat on your side.
   c. Place your front toward the chair.

3. OBJECTS IN RELATION TO BODY PLANES

   a. Where is the ball -- in front of you, behind you, or by your side?
   b. Is the ball by your feet or by your head?
   c. Is the chiar to your side, to your back, or to your front?

4. BODY PARTS IDENTIFICATION (limbs, etc.)

   a. Where are your feet? Touch your feet.
   b. Where is your arm? Touch your shoulder.
   c. Where is your leg? Touch your elbow.

5. MOVEMENT OF THE BODY

   A. Trunk Movement While Fixed (non-moving position)

      a. Bend forward toward the front.
      b. Bend to the side; bend to the other side.
      c. Bend slowly backwards.

   B. Gross Movements in Relation to Body Planes.

      a. Where is your side? Can you move sideways?
      b. Lets try forward backward and sideways movement.
      c. How can you jump up?

   C. Limb Movements

      a. What can you do with your arms? Straighten arms bend arms lift arms lift arms at your shoulder turn arms (rotate) them both ways
      b. What can you do with your legs? straighten legs bend one leg at your knee
      c. Lift one leg at your hip.

6. LATERALITY OF BODY

   a. Touch your left leg.
   b. Touch your right arm.
   c. Climb this ladder using your left leg and left arm first
   d. Touch your right ear.

Body Image (continued)

7. LATERALITY IN RELATION TO OBJECTS

a. Place your left side nearest the chair
b. Put your left foot on the box
c. Go up to the wall and put your right side nearest the wall, now move and touch the wall with your left side

8. STATIC OBJECTS RELATED TO LATERALITY

a. Is that box by your right side?
b. Is that stick touching your right or left foot?
c. Which arm is nearest the ball?

9. LATERALITY AND MOVING OBJECTS

a. You stand still and I'll move around you. You tell me where I am. When am I nearest your back, nearest your left, and nearest your right?
b. Now I'll move a little faster. You tell me where I am now
c. Stand still and tell me where the rolling ball is. Is it to your left, your right, your back, or your front?

10. MOVING BODIES LATERALITY IN RELATION TO OBJECTS

a. You walk around this chair and tell me where the chair is in relation to you.
b. Using two chairs around which to walk a figure-eight, walk around the chairs and tell me where you are. When are your left and right sides of your body near the nearest chair?

11. THE LEFT AND RIGHT OF OBJECTS (PERSONAL REFERENCE SYSTEM)

a. Point to the left side of the table
b. Point to the right side of the chair
c. Show me the right and left sides of the paper

Note: In steps 12 - 16 the child is not moving, but is asked to make judgments of another's body parts or movements.

12. STATIC DIRECTION ABILITY WITH OTHER PEOPLE (PROJECTION INTO ANOTHER'S REFERENCE SYSTEM).

a. (Person opposite child) Show me my left arm.
b. Touch my right elbow
c. Touch my left ear with your left hand.

13. LATERALITY OF OTHER PEOPLE IN RELATION TO STATIC OBJECT

a. Which side of my body is nearest the chair?
b. As I walk around the figure eight (the two chairs, tell me which side of the object is nearest to me?

Body Image (continued)

14. RELATION OF STATIC OBJECTS TO LATERALITY OF OTHER PEOPLE

a. (Teacher moves chair to a static position)
   Where is this chair in relation to me?
   Is it at my left or at my right?
b. Where is the ladder in relation to me?

15. MOVING OBJECTS IN RELATION TO OTHERS' LATERALITY

a. Tell me where the ball is as it moves around my body.
   Is it to my right, my left, my front, or my back?
b. Where is the moving rope? Is it to my front, my back, my left,
   or my right?

16. LATERALITY OF OTHERS' MOVEMENTS

a. Tell me, am I walking to my left or my right?
b. Which way am I moving?

(Cratty)

PHYSICAL EDUCATION RESOURCE
FOR
SPECIAL EDUCATION
PRINCE GEORGE COUNTY PUBLIC SCHOOLS

WAND ACTIVITIES

Challenging, interesting and fun for all children.

Equipment Needed: Make different length wands from old broom and mop handles. Roll two sheets of newspaper together and tape. Cut off ends to make a good and durable light weight wand.

Areas of Concern Where Wand Activity May Help

a. Balance
b. Left with right segmental intregation and top with bottom).
c. Locomotor movement stimulation + (walk - hop - jump - etc.)
d. Axial movement stimulation (band stretch, reach, twist, turn).
e. Eye hand coordination +
f. Eye - foot coordination +
g. Motor Planning +
h. Problem solving +
i. Social Perception - (peer interaction)

Suggested Activities

1. Extension of Self into Space -

   Children reach out into space with wand in different directions
   Wave with free swinging movements
   Lay on ball - kneel - crouch - stand and do swinging movements -

Note: Encourage slow movements
Help the child determine his balance point as he reaches or stretches out.

2. Balance wand on various parts of body -

palm of hand	forehead
back of hand	toe of foot
one finger	knee

3. Balance wand on palm of hand while balanced on one foot - on knees - while sitting on floor, etc.

4. Balance wand on floor - let go - clap and catch. Repeat clapping twice, etc. let go and turn around and catch.

PARTNER ACTIVITY -

1. Partners face each other at appropriate distance (2 - 3 - 4 feet). Each balances wand on floor and on teacher's signal each attempts to let go of his wand and get partner's before it hits floor. Try with 3 - 4 - 5 - 6 - 7-8 children - vary the distance and change direction.

2. One partner places wand in horizontal position in front of chest with one end of wand resting on palm of each hand. Partner attempts to lift wand up of palm of hands by using index finger and finding the "balance" center of wand. Reverse.

3. Throwing and catching wand with partner in horizontal and vertical planes while facing partner.

4. Problem Solve: One wand - 2 partners - suspand wand between you and without using hands move in various ways.

   Stoop down - raise up
   walk around in a circle - backward - forward in straight line - Follow a zig zag lane - figure eight - circle, etc.

Individual Activities

1. Wand on floor - in horizontal or vertical position - jump, hop, leap over
   Get from one side to other side using hand and feet in support positions.
   Get over any way you can think of-
   Jump over - roll - and stretch.
   (combination of movements)
   Stand at one end of wand - Get to other end and without touching. - Use any movement you can.

   The children can team up in groups of 2's, 3's, or 4's and put wand together to make shapes - Letters, numbers, etc.

   The kids will show you many other ways to utilize wands. Jot the ideas down and send them to Bob Janus at Capitol Heights. We will send them out to others

NEW USES FOR OLD BICYLE TIRES

TUG OF WAR:

TWO HANDS Face each other, grasp the tire with both hands, and pull.

ONE HAND Stand sideways to each other, grasp the tire with one hand, and pull.

ONE HAND, HOPPING - Stand sideways to each other, grasp the tire with one hand, lift one leg, and, while hopping try to pull the opponent towards you.

TWO HANDS, BACK TO BACK Stand back-to-back, bend down, place both hands between knees, grasp the tire, and pull.

BACK - BACK Stand in the tire, back to back, then hold the tire at hip level and walk away from your opponent.

FACE-TO-FACE Stand in the tire, face to face, then hold, the tire at hip level and walk backwards.

HEAD-TO-HEAD Place the tire over both persons head, tilt heads slightly backwards and pull, keeping hands clasped behind the back.

RELAY RACES:

ONE(TWO) TIRE CARRY Carry or drag the tire, in one hand or both hands, to a line, return in the same manner, and pass the tire to the next person in line.

HIP CARRY Place the tire over the head and at hip level. Hold the tire in this position while running to the line and back; then give the tire to the next person.

PHYSICAL EDUCATION RESOURCE
FOR SPECIAL EDUCATION

PRINCE GEORGE COUNTY SCHOOL SYSTEM

FUN WITH CARDBOARD BOXES

Equipment:

Carboard boxes - flattened out - Try to get boxes approximately 14" x 14" square and 20" to 24" high with flaps folded. Get boxes with flaps at both ends. These flaps give the box extra length when the children use them.

Areas of Concern that Box Activities May Provide Experiences For:

Body Image
Spatial Awareness
Locomotor Skill patterns
Axial skill patterns
Problem Solving
Motor Planning
Agility
Control
Following 1-2-and 3 step directions

Activities:

Note: Use flattened boxes for structure - "Go out and sit on a box."

1. Hide in the box ------we don't want to see any part of you.
2. Find another box and hide - this time let your fingers stay outside.
3. Go through 2 boxes and end up on the (color) rope line.
4. Go through your box so you come out feet first. Can you go through a different way and come out feet first. (stomach down - stomach up - on side, etc.)
5. Go through the box with stomach facing ceiling.
6. Get in box - and from inside - now move it to another space.
7. Put your feet inside box - Now move it using only feet to move it. Feet outside - you inside - now move it.
8. You inside - only hand outside - now move it.

Partners Using Boxes -

1. One partner at each end of box - go through - "Ready Go".
2. Partners get in box - move it somehow.
3. Hold hands and go through.
4. Tie ankles together and go through.

ADDING OBJECTS:

1. Get a bottle and go through a box.
2. Hold bottle with other parts of body other than hands to go through a box.
3. Get 2 bottles and go through box.
4. Get 2 bottles and go through box feet first.

DIRECTIONS FOR MAKING A YARN BALL*

Materials:

One 70 yard skein of cotton rug yarn (take 1 skein per ball)
A piece of cardboard 4 inches in width
One ball of twine

Directions:

Step I — Take one end of yarn and wrap it loosely around the width of 4 inch cardboard about twenty times. Cut the yarn from the skein. (See Fig. I)

Fig. I

Step II — Carefully slip the yarn off the cardboard and wrap the center of the yarn tightly with twine several times and tie it securely. This forms a looped bundle as illustrated in Fig. II.

Fig. II

Step III — Continue repeating steps I and II until the entire skein of yarn is tied into separate bundles. (Usually one skein of yarn will make about 14 looped bundles.

Step IV — Take two looped bundles and tie them together with twine by tightly wrapping the bundles in the center with twine several times then tying the twine securely. Do this until all looped bundles are tied together in two's. (See Fig. III)

Fig. III

Step V — Take two double bundles and tie them together. Be sure to tie them securely by wrapping the looped bundles in the center with twine and tying the twine tightly.

Step VI — Take two double looped bundles and tie them together. Continue adding the double looped bundles to those which have been tied together previously until all bundles are tied securely together. This will make a compact bundle of yarn well secured in the middle with twine.

Step VII — Take the scissors and cut all looped ends so the cut makes two equal lengths of yarn. When this process is completed the cut yarn ends spring apart and form a fluffy ball.

Step VIII — Shape the yarn into a rounder shape by clipping off the uneven yarn ends.

THE YARN BALL IS COMPLETED.

****

*Courtesy, Bette Logsdon, Consultant for "Ready, Set, Go" National Instructional Television Series

Wool may be substituted successfully for the cotton rug yarn but it is more expensive if new yarn is being purchased. However, scrap wool yarn is often easily collected at no cost.

It is important to follow the directions and wrap the twine around the bundle several times before tying. The twine makes the core heavier and adds weight to the ball which is needed to throw it a greater distance. In addition, the tying of the yarn is small bundles separately, tying them together in two's, as well as adding them two at a time for form the ball makes the ball more secure and less apt to fray.

STRETCH ROPE ACTIVITIES

Equipment Needed: Stretch ropes, preferably 1 per child. You should be able to buy material such as elastic in most sewing shops.

Areas of Concern that Stretch Ropes May Help:

Body Image	Motor Planning and Problem Solving
Balance	Agility
Gross Motor Locomotor	Social interaction
Form and movement perception	

A. Individual Activities with a Small or Individual Rope.

1. Make shapes, triangles, squares, circles.
2. Make letters and numbers.
3. How big, small, high, low, long, short can you make the rope?
4. Can you make yourself as big, small, long etc., as the rope?
5. How many parts of your body can you stretch the rope with? 2, 3, 4, 5, etc.
6. How many parts of your body can you stretch the rope with at one time?
7. Hold one end of the rope down on the floor with your foot and do "pull ups" with left hand, right hand, 2 hands.
8. By holding the rope down with 2 feet, put the rope over your neck and do pull ups.
9. Put rope over head and around the neck, and stretch rope down and step over and through rope.
10. Stretch the rope with one foot and one hand and walk.
11. Same as 10, except use both feet and both hands.
12. Stretch the rope between the feet and walk.

B. Try one of activities in (A) using one rope and 2 children.

C. Group Rope Using Whole Class:

1. Stretch rope and do locomotor skills in a circle. Run, walk, skip, etc.
2. Put the rope over heads and touching the back and stretch out. See if children can work together without letting rope down. Try walking sideways, toe touch, standing on one foot and other activities that you may think of.

Note: For some of these activities the rope may have to be doubled up to make rope smaller.

PHYSICAL EDUCATION RESOURCE

HOOPS

A. Equipment Needed: It is suggested that you buy plastic-water tubing at Montgomery Ward's Store (approximately 100' at $3.75). You will have to buy the "connection" at 19¢ each to join the tube together. 100 will make approximately 13 hoops with a diameter of 24" - 26".

B. Areas of Concern Where Hoop May Help:
Balance, agility, body-hand image, locomotor, motor planning and movement perception.

C. Suggestions for Children Working with Hoops:
Many more ideas will come to you as you use hoops with the children.

1. Stand on 1 foot inside hoop, hop to the outside.
2. Put 2 parts of your body inside the hoop.
3. Put 2 parts of your body inside the hoop and 2 parts outside the hoop.
4. Stand on 2 feet inside the hoop, now jump outside.
5. Do animal walks around the outside of the hoop.
6. Do locomotor skills, i.e., run, hop, skip, gallop, etc., around the outside of hoop.
7. Roll the hoop to a partner.

Grid Games, using Hoops and yarn balls or bean bags:

Place the hoops in this fashion:

(T) Top

(L) (C) (R) Left Center Right

(B) Bottom

Have the child toss a bean bag in the hoop called by you.

Example:" Toss the bean bag in the top Hoop", etc.

You can also put color cards inside of the hoops, or letters or numbers inside for math and reading concepts.

DIRECTION GAME

I. Equipment: markers, squares, circles, triangles of different colors, number cards, letters.

II. Area of concern the game may provide experience for:

1. Motor Planning.
2. Problem solving.
3. Locomotor skill patterns
4. Following instructions

III. Directions for Game:

Have squads of 4 to 6 children at one end of room. In front of each squad at the other end of the room have a marker. Behind each marker have objects which you want to work with. (such as numbers, or letters, or symbols, etc.)

When the direction is given the first person in each line tries to follow this direction as quickly as possible. Who ever gets back to their squad first - that squad receives a point. (Five points per game).

IV. Examples of Directions:

CAN YOU DO THIS?

Problem Solving: (new game)

1. Skip around the marker pick up #5 and skip back.
2. Run and touch the red circle and hop back.
3. Hop to the marker and bring back #2 and 4.
4. Run to the marker and pick up the green triangle and #6 and hop back.
5. Crab crawl around the red square and run back.
6. Skip to green square, pick up 2 and 4 and run back.
7. Crawl through the box, pick up the red circle and run back.
8. Crawl through the box bottom first - pick up #5 and skip back.
9. Get on scooter on your knees and go around red square.
10. Get on scooter on stomach and go around red triangle.

MOTOR DEVELOPMENT PROGRAMS
SPECIAL EDUCATION DEPARTMENT
PRINCE GEORGE'S COUNTY PUBLIC SCHOOLS

LEARNING AND FUN WITH MOVEMENT ACTIVITIES

Rolling Down the Tube

Chuck Smith

Target Behavior:

a. problem solving
b. speed and agility
c. eye hand coordination
d. fun

Equipment:

a. carpet rolls (inserts) from any carpet center
b. climbing ladders or any piece of equipment that will enable you to rest the carpet rolls on a downward angle.
c. yarn cups or ordinary drinking cups
d. plastic, practice golf balls
e. any container available to put golf balls in.

Description of Activity:

a. set the carpet tube on a downward angle between braces.
b. instruct each particpant to put the golf ball in the tube run down to the opposite end and catch it in the cup. Run to the container and drop the ball from the cup into the container.
c. next person repeats as in a relay contest.
d. first group to complete task wins.

FUN WITH SHAPES

Target Behavior:

a. Tactile stimulation
b. Fine motor control

Equipment:

a. Blindfolds
b. Shapes, made from wood, or cardboard
c. Holders for shape to go on.

Description of Activity:

a. Have the group sit in a circle, place the shape holder with shapes on it in front of each person. Put the blind folds on. Have the particpants empty their shapes from their holders in front of them. Make sure each person has the holder in front of them. Call out the shapes, they must find them by feeling them and placing them on their holder. Game ends when all shapes are back on their holders.

ICE CREAM CONE GAME

Target Behavior:

a. Agility
b. Body Control

Equipment:

a. Balloons
b. Yarn cups or paper drinking cups
c. Scooter boards optional

Description of Activity:

a. Have the children stand on a starting line with their "pretend" ice cream cones. They must walk to the other end without dropping the ice cream and sit on a scooter. Sitting down riding the scooter they must return to their original starting line and remain sitting on the scooters until everyone has completed the game.

LEARNING FUN WITH NUMBERS AND INNOVATIVE EQUIPMENT

Jim Bennick

"SNOW"

Target Behavior:

a. Number recognition
b. Number sequence recognition

Equipment:

a. A bucket full of styro foam packing discs with numbers printed on them with felt pen.
b. One Baskin-Robbins ice cream bucket.
c. 3" x 10" poster board number cards devided into 5 equal sections.
d. Timing devices (for purposes of demonstration a 60 second egg timer and a marble ramp).

Games Description:

a. The foam discs are placed in the bucket and by some means (a ladder or suspending bucket on ceiling) allowed to "snow" onto the game area. Each participant is given a number card to begin the game. The object is to search for a disc with the number that will "complete" the card.

Variation #1:

5 random numbers are printed in the 5 sections of the card. The participants are asked to cover each number with a disc printed with the same numbers. The game time is 5 minutes. Therefore, the object is to "fill" as many number cards as possible within the 5 minute period.

Variation #2:

A sequence of 5 numbers is printed on the number card. However, one, two, three or four numbers are omitted. Therefore, the object of this variation is to complete the sequence by covering the vacant spaces with the proper discs. (The 5 minute time limit can be used in this situation or a 20-30 second timer can be used for single card attempts.)

"CUPS AND BLOCKS"

Target Behavior:

a. Number recognition.

Equipment:

a. a bucket of plastic cups (or tennis can tops) with the desired numbers printed on them.
b. a set of blocks with one of each of the numbers represented on the cups.
c. a bucket (that can be suspended from the ceiling) that will hold the # blocks.

Game Discription:

a. The cups are spilled in the middle of the game area. The object of the game is to find the "hot" number and return to your designated space before the other participants. The "hot" number is drawn from the bucket by one of the contestants, hidden from the others while it is taken to a small stand and placed on the block tower (which grows as the game continues), and called out as the signal for all contestants dash to the middle to find a winning cup. If, in rush, the tower topples, it must be rebuilt before the offender is allowed to search for a cup.

LEARNING AND FUN WITH OLYMPET HOOPS AND WANDS

Tim Buel

Target Behaviors: Using Olympet Hoops and Wands to Enhance:

a. visual efficiency
b. muscular coordination
c. have fun

Equipment:

a. Olympet hoops
b. wands (plastic or paper)

Description of Activity:

a. Students positioned at a variable distance from the instructor so as to insure success on part of participants.
b. Olympet hoops are either thrown (like a frisbee) or rolled on floor.
c. Students attempt to "spear" hoop as it approaches them.
d. The activity leader attempts to vary the HEIGHT, DISTANCE AND SPEED or the hoops that are thrown in the air so that students have to make adjustments in "catching posture" to successfully "spear" hoops.
e. Hoops may be thrown in following patterns:

    a. one hoop at a time to each student in group
    b. two hoops thrown in succession to one student, throw one hoop . . . slight pause . . . throw second hoop with student attempting to spear hoops with wand in left or right hand.
    c. two hoops in succession with student having one wand in each hand and catching 1st with left and then with right

Variations and Expansion of Activity:

a. Set up teams for competition. . . keep score. . . successful catches
b. Set up a relay . . . most number of hoops caught by a team, team finishing first, etc. etc.

LEARNING AND FUN WITH WOODEN BLOCKS

Target Behavior:

a. Enhancing balance behavior . . . exploring equilibrium
b. having fun

Equipment:

a. wooden blocks of various sizes and heights.

Activity:

a. design "pattern" strategies for providing balance experiences that will cause students to experiment with static, dynamic and pivotal balance.

b. patterns should take into account the following:

   a. child's level of balance ability
   b. the risk taking ability of the child
   c. the child's ability to attend
   d. the child's frustration level

Variations and Expansions of Activity:

a. After having participants experiment with balance in a non threatening environment . . . providing for much success . . . vary the patterns to increase difficulty.
b. Design race between two particpants that requires balance tasks
c. Design a relay race for team participation

LEARNING AND FUN WITH MILK CARTONS, ETC.

Bob Jackson

"CLIP IT"

Target Objectives:

a. Fine motor deserity
b. Body image
c. Socialization with a partner
d. Visual and audity discrimination

Equipment:

a. color coded plastic milk cartons
b. an equal number of color coded clothes pins in each carton (pin color matches carton color)
c. a rope or string which has cooresponding color coded areas marked off.

Description:

a. players select their "color" carton
b. cartons are placed in a straight row across the floor (at one end)
c. on command, players shake the pins from their cartons (one at a time only - if more than one comes out extra pins must be placed back in carton)

d. players then run to the rope and "clip" their clothes pins on the proper cooresponding color.
e. return to carton and repeat until all pins have been clipped to rope.

Variations:

a. Players shake pins from carton and then "clip it" on a designated body part - run to rope and clip it and then "clip it" on rope.
b. Players are in pairs player (1) shakes pin out clips it on body part of partner - partner runs to rope unclips pin then clips it on.
c. if number of players is larger the third person may take the pin from the second player and clip if on the rope.
d. if more difficulty is needed players may only use one hand (indicated by teacher- right or left) when clipping the pin on and removing it. The off hand (not used) may be placed on an indicated body part or in the pocket or behind the back.

LEARNING AND HAVING FUN WITH SMALL EQUIPMENT

Mike Nelson

The Marble Game

Target Behavior:

a. Improvement of visual behavior (visual attending)
b. "Aiming and adjusting"
c. Impulse control
d. Having fun

Equipment:

a. Olympet Hoops
b. T-stools
c. Golf tubes (wands, plastic or paper)
d. Marbles

Activity:

a. Students sit in circle formation (structure) hoop in center of circle
b. Each takes a turn at trying to put marble in olympet hoops by dropping marble through golf tube
c. students make adjustments relative to performance
d. objective is simply to get a marble in the hoop during the initial stages, success is insured if particpant get his/her marble to stop in the hoop. If student knocks another child's marble out of hoop it still counts as a successful try.

Variations:

a. allowing one student to try to knock another's marble out of hoop thus taking away a score from the student whose marble is knocked out of hoop.
b. allow students to shoot two (2) marbles, one right after another. If both marbles stay in hoop an additional point is given, etc.
c. divide into small groups of 3 or 4 students and play "team against team" adding total number of marble a team gets in either "its" own hoop or a "common" hoop for all teams. Color code marbles.

THE MARBLE AND TOWER GAME

Target Behavior:

a. (same as for Marble Game)

Equipment:

a. Small blocks
b. Dowels
c. Large marbles
d. Backstop
e. Plastic or paper tube

Activity:

a. child rolls marble through tube and into the dowels
b. for each dowel knoced down, participant must place a block on the tower.
c. child who finally knocks the tower down must collect all the blocks at end of game

THE RUG TUBE GAME

Target Behavior:

a. locomotor patterns and skills
b. cooperative task behavior
c. motor planning
d. having fun

Equipment:

a rug tubes

Activity:

a. performing various locomotor movements with rug tube used to structure movement
b. performing various simple problem solving tasks

CHAPTER IV

SELECTED RESOURCES FROM:

CHILDREN'S HEALTH DEVELOPMENTAL CLINIC

Director
Dr. Warren R. Johnson
Professor of Health Education
University of Maryland

Copyright 1971

a humanistic dimension of physical education

WARREN R. JOHNSON

For over fifteen years, every semester and for thirteen summers, I've been conducting a clinic for children with various developmental problems. Over 6,000 such children and over 2,500 volunteer students and teachers, as clinicians, have been involved to date. We call the program the Children's Physical Developmental Clinic. Evidence derived over the years would seem to justify proposing that a new dimension be added to existing health and physical education—a clinical dimension.

Our program is described here in brief, because clinical and experimental indications are that it has important implications for child development, educational progress, physical and mental rehabilitation, parenthood education, and education in humanistic service. It has been replicated, successfully, by several former clinicians in different school, college, and university settings. Our program and those modeled after it have brought to students and others the opportunity to experience social relevance and community service of a high order. Costs have been minimal because only in summers are salaries paid; and because professional training and community services are involved, our colleges or universities have tended to make their physical education facilities available without charge on Saturday mornings and during sizable blocks of time during the summer.

How It Began

In the spring of 1957, I undertook a one semester experiment to find whether 24 diagnosed brain injured, hyperactive children would benefit from an individualized, one hour per week, six-week fun-with-a-friend-in-a-gym program. The friend was a volunteer senior student in physical education who worked playfully with a child. The child's interests determined the activities. The friend, with attention always focused on the child, ensured support, safety, and success. He motivated, challenged, and rewarded effort. He tried to make mistakes and "failures" a part of the fun. He helped make other children and clinicians part of the fun, people to be played with and enjoyed; everyone was "in-on." He helped the child gain the control of behavior that developmental and educational tasks require. He tried to make the child feel good about himself as his confidence in what he could do alone and with others increased. The clinician was always there to meet the child, and after his hour, to see him off. Also, he talked with the parent at the end of the hour so that useful information could be exchanged.

In a truly strange way, something unexpected had come to life. The children, students, and parents made it perfectly clear that this "thing" would continue to "be there." Parents, therapists, and educators reenrolled and referred children as though a new community facility had been officially opened. *De facto*, they evidently were right. I found the pressure irresistible but disconcerting in that, at the time, I was busy with my teaching, research undertakings, and the rearing of a son (who is now among those who help manage the clinic).

Children's hospitals, agencies for the blind and for mentally retarded, special and physical educators, psychologists and psychiatrists, pediatricians, vision specialists, and others, began referring children with an incredible range of developmental disorders and "conditions." Presently, a glance about the gym would reveal clinicians working intensely with mentally retarded, brilliant but emotionally disturbed or socially inept, brain injured, hyper- or hypo-active, cerebral palsied, uncoordinated, aggressive, overweight, blind, deaf, occasionally dying children. Armless. Dwarf. Giant. Kids having fun with friends.

Staff Meetings

Weekly staff meetings were quickly instituted. Specialists in psychology, special education, psychiatry, pediatrics, vision, speech, etc., soon became regular participants in these case-centered discussions. Most importantly, the staff meetings made possible an on-going dialogue concerning the complex task demanded of the clinicians. They were not just physical fitness or movement skills builders or social skills improvers or emotional health helpers or adjuncts to numerous remedial educational and therapeutic undertakings. They were also advisers to parents and specialists and, again most importantly, close but objective friends.

Parent Education and Counseling

Also very early, the need for a parent education and counseling program was apparent. As certain students became experienced, they began to function in a supervisory, helping capacity in the activity areas, thus freeing me to spend considerable time with the parents.

The parents' program came to include an introduction to the clinic approach and lecture-discussions on broadly conceived health and developmental matters, relevant physical developmental-emotional-social problems, physical fitness, including coordination problems, developmentally based learning disorders, nutrition and weight control, body types, communication with children, and sex education. Guest speakers and films were soon utilized.

Warren Johnson is professor of health education and physical education at the University of Maryland, College Park. He is director of the Children's Physical Developmental Clinic which is described in this article.

The almost weekly meetings with parents made possible an on-going dialogue concerning what was going on in the clinic, at home, in the neighborhood, and at school. I had not realized how hungry for information, for emotional release, for reassurance, for guidance parents are.

We set about attempting to cultivate a fun-fitness attitude in the home. But the basic question that we confront with the parents is: How can we team up so as to be most helpful to the children? Some parents have brought their children reluctantly because they have been virtually forced to by some therapist or school official. They have sometimes viewed our program as one more inconvenience imposed on them by a "troublesome" child. However, many have caught something of the spirit of the clinic, have learned to perceive their relationship with their children in a new light, and in some cases they have transformed their entire way of family life as they observed their children's response to our child centered approach.

In the last session with the parents, I always thank them for bringing their children. The children do at least as much for us as we do for them.

The Clinicians and Their Training

For a number of years clinicians were almost all health, physical education or recreation majors of at least junior year standing. I had supposed that a considerable degree of previous training in gymnasium, play and sports, and fitness building and body mechanics skills was needed to qualify students to function successfully in this type of clinical work. The ability to presuppose such training made it possible for us to concentrate our staff meetings upon numerous developmental problems. With the aid of specialists we could devote our attention to psychosocial, visual, small muscle, and other special problems with which our program might assist.

However, as time passed, more and more students in other disciplines and at lower academic levels tried to get into the program. Being profoundly impressed by the many mind-expanding benefits of working with the children, we responded by accepting all volunteers under certain conditions, including:

1. They must commit themselves to the pre-clinic intensive training program.
2. They must participate regularly in the early Saturday morning staff meetings which precede every clinic session.
3. They must submit themselves to the discipline of concentrating on their child for the hour, noting and later recording his behavior and progress, and being entirely reliable with respect to the child's *knowing* he would be met by his clinician each week.
4. They must be willing to serve as an assistant clinician under the supervision of a clinician until such time as—one or more semesters later—they are deemed qualified to be a clinician. (After all, you don't build bridges with good feelings; neither do you help children, developmentally, with good feelings alone. You have to learn how and work at it.)
5. They must get into good physical shape. The kids move — oftentimes unbelievably — and clinicians must move with them

So, over the years we have evolved from a clinician staff of 12 physical education majors to around 140 volunteers from numerous departments of the university, such

Nonphysical education majors serve effectively as clinicians—approaching the child sensitively with respect to his special problems, moving with him, appreciating the healing growthful qualities of fun.

as: education, special education, human development, psychology, sociology, anthropology, health education, business, art, languages, chemistry, etc., as well as physical education and recreation. Two hundred or so students tend to show up at the first training session, but 50 or more withdraw when they become aware of the rigorous nature of the demands to be made on them.

We attach the greatest importance to our student clinicians. They are expected to establish a friendly relationship with their children, study them for their abilities and interests, and guide them through sequences of activities which are geared to what they can do and what they can learn to do. They are also expected to strive to make both children and parents independent of us—able to continue on their own.

And as the clinicians apply their intelligence and skill in the interests of the child, they also benefit. They increase their awareness of human individuality and performance. Since no set of instructions or rules can be followed in dealing with the different children, the clinicians must adjust themselves to a particular child's developmental level, abilities, and disabilities. They must think their way through the problems and situations which arise. The student-clinicians are not asked to *learn* in the clinic (although of course they do learn); they are asked to *think*. They are asked to think of ways to utilize their know-how and imagination in guiding their children to new levels of performance and self-appreciation. Moreover, they learn, perhaps as never before, of the unity and interplay of body, mind, and social adjustment. And they see what a friendly, trained, guiding hand can help a child accomplish.

The Clinic Activities

A wide variety of gymnasium activities, conditioning and coordination exercises, including those on our unique automated equipment, games, and modified sports are utilized by the student-clinicians in their pursuit of specific fitness-coordination objectives. The selection of just what activities to use depends upon the interests of the individual child. Good clinicians quickly become con artists at motivating and extending interests. As soon as a clinician is assigned a child, he begins a careful informal evaluation of his physical status and movement control. However, physical capabilities are viewed within the context of their meaning to the child—his motivations, self-concept, and confidence. What would he like to do? What is he willing to do? Will he try something a little more difficult next time? This careful observation of the child is approached cautiously and in the spirit of fun. It is not threatening. It proposes doors that may be opened.

Unlike therapeutic programs which administer something to the child—be it medication or exercises—our clinic accepts the challenge that pleasurable movement experiences are essentially meaningful to children. Natural incentive plus friendly support and skillful guidance can bring about self-rehabilitation. In other words, the child is a participant in his own "treatment" and is fully involved in it emotionally as well as physically. Playful tussling with one or more others may help him to realize that he can relate to other people on a close basis. A missed ball by his clinician may teach him that everyone makes mistakes. A contrived situation which forces him to fail but makes him laugh teaches him that failing is not fatal and isn't all that important. Failing in this effort does not make you "a failure."

Although there is a great deal of variation in the program developed to meet the needs of different children, they are all planned with an eye to: (1) getting at the specific difficulty for which the child was referred; (2) improving the child's basic fitness and movement skills if there have been problems; (3) encouraging a "fitness attitude" in the child and in his entire family; (4) helping the child to realize that his basic instrument—his body—can be brought under his control, with all that this implies for his self-assurance and his self-concept; and (5) as needed, fostering social skills and social adjustment through group activity in which the child becomes aware of his ability to function successfully with others even though his performance level is not high.

Evidence of Benefits

Evidence that clinical health and physical education are beneficial derives from three sources which will be discussed briefly: (1) reports of clinicians, (2) feedback from parents, therapists, and teachers, and (3) formal experimental research.

Clinicians. Within six weeks, most of the children, regardless of the nature of their problems, give evidence of positive behavior change. (Indeed, the sixth Saturday has come to be known as "magic" week for the many more disturbed children who have not previously seemed to be responding.) Clinicians' reports in staff meetings and their written records may include such things as:

The child is now:
- willing to leave his parent.
- beginning to accept, communicate with, even seem to like me.
- willing to come into the gym (or pool).
- able to tolerate, even like, physical contact.
- able to stay with an activity for a few minutes (or seconds).
- beginning to play with another child.
- slowing down and showing better control.
- playing with other clinicians and children.
- understanding some of what the game is all about.
- walking, running, throwing, catching, etc.
- able to climb with more control on the monkey bars, get on the trampoline, etc.
- more relaxed and confident.
- helping other children learn a skill or get along in a group or feel better (incidentally, what a thing of beauty to behold!).

Parents, therapists, and teachers. The most common feedback from this group, over the years, has been: "He's more confident." They've usually gone on to explain: "Not just in physical activity but in everything he wants to do or that is expected of him—school work, dealing with adults, and social involvement generally."

Well-known therapists in major institutions, such as Johns Hopkins, Children's Hospital in D.C., and National Institute of Mental Health, have been referring children to us for more than a dozen years because our clinic supports and facilitates their therapeutic efforts. So have private practitioners in pediatrics, psychiatry, vision, etc. These people have also noted greater generalized confidence. But they have especially been impressed by improvements in neuromotor-perceptual organization and perhaps psycho-social skills of the children.

Controlled research. For over seven years now we have been conducting formal research to test hypotheses gen-

erated by clinical observations. Suitable control groups have, of course, been utilized. Reports have been published which present statistically significant improvements in self-concept (*Research Quarterly*, October 1968), perceptual motor skills (*Perceptual and Motor Skills*, April 1967), risk-taking behavior (*Child Development*, December 1970), intellectual and perceptual development (*Research Quarterly*, December 1969). In addition, a paper on the effects of the clinic program upon girls was presented before the American Association for the Advancement of Science in 1968; a completed project on certain psychological effects of the clinic upon mildly disturbed boys has been submitted to *Psychological Reports;* and a project funded by the Office of Child Development (HEW) is now in progress to evaluate certain interacting effects of the clinic experience upon parents and clinicians as well as children. An additional project in progress seems to be indicating strongly that clinic parents, as compared with a control group, become increasingly "life oriented" as opposed to nonlife, despair, or even death oriented, following a semester in the clinic. Sex attitudes of parents definitely improve following their sex education session (research completed).

These projects have been immensely difficult to accomplish, but they help to provide a scientific base to undergird clinical observation. They have been most helpful in convincing administrators that opening new clinics can be justified on the basis of solid evidence of value.

Looking to the Future

It is not unrealistic to imagine clinical physical education—in such forms as our Children's Physical Developmental Clinic—becoming a nationwide phenomenon, as leaders are trained to organize and conduct programs. Admittedly, it has taken many years, but after a slow start, clinics are forming at a more rapid rate. Former students have now formed Children's Physical Developmental Clinics in Louisiana and Florida (Louis Bowers, the first, a ten-year veteran now), Georgia (Ernest Bunschunch), Howard County, Maryland (John Haigh), Prince George's Community College, Maryland (Paul Hahn), and Essex Community College, Baltimore (Lois Moses Shofer). Bowers, Haigh, and Hahn have trained leaders who are now conducting clinics.

Most of these people are members of health and physical education faculties and have or are working on their doctorates. Their clinicians are, for the most part, physical education majors, although Haigh and I have used even high school students as assistants to clinicians to good advantage. The clinic directors generally recruit their volunteer clinicians from their health, physical education, or recreation major classes.

This approach has a number of advantages:

1. It provides an attractive experience for those students looking for humanistically relevant things to do.

2. Student interest in the work is increased by the possibility that participation may improve a grade in a course. "Volunteers" are thus initially assured. (But genuine interest is usually generated by the first experience, and ulterior motivation gives way to interest which leads to repeated service, sometimes for a number of years.)

3. Majors, who are generally trained for large group or team leadership, become intensely aware of the *individual* and of the highly individual nature of the developmental process. They have frequently reported a new sensitivity to individual needs, emotions, capabilities, etc.

4. These majors can usually be counted on to have a degree of familiarity with games, gymnastics, team sports, safety, and other useful skills.

5. The clinic experience is obviously excellent adjunctive preparation for individuals planning to specialize in elementary physical education, adaptives, physical therapy, or recreation therapy.

6. Graduate majors in this field would usually seem the most likely to establish new clinics as they move on to other colleges and university settings. They tend to have easiest access to unused gymnasium facilities, etc.; knowing about the problems that a new program can pose for a busy facility, they tend to be in a good position, working from the inside, to minimize friction and disruption of other progams.

On the other hand, some years ago as more and more students from outside the HPER field showed up to work with the kids, I decided to experiment with them as my clinicians. The problem posed was: Is it possible to train bright and motivated students from virtually any discipline to work effectively as clinicians in a Children's Physical Developmental Clinic? Time was obviously of the essence. Could a few hours of preclinic training plus staff meetings before sessions and supervision during sessions give rise to beneficial responses in the children?

After half a dozen years of making extensive use of nonphysical education majors as clinicians, leaders, and supervisors, I am able to report with complete confidence that the physical education major is *not* necessary. In fact, it has been rather depressing to find that far more nonmajors than major students are interested in submitting themselves to the discipline of preparing to serve and actually serving in our program. On the other hand, perhaps we have learned some significant things which may encourage the spread of clinics like ours whether or not physical education people are available for service.

Things we have learned about utilizing nonphysical education people include:

1. Assuming the presence of trained and experienced leadership, supervision, and appropriate assigning of children, bright and motivated people can quickly develop the needed physical fitness to *move* with the children.

2. They quickly acquire the needed activity, play, and safety skills. (Few of our children ever achieve high skill levels.)

3. They are quick to learn to approach the particular child sensitively with respect to his special problems, needs, and developmental level.

4. They quickly gain insight into physical-emotional-social and communication interactions which so influence total organism functioning. (An embrace by a child who could not be touched is recognized for what it is—a giant step.)

5. They think and talk about the need to fade out the barriers between "mind and body"; the need to learn to deal sensitively with people at their own level; the healing growthful qualities of fun, especially fun with friends; the satisfaction to be found in helping others do their own thing—not yours; and the meanings that these insights carry for dealing in nonclinic situations with one's own friends, mates, future mates, and children.

CHILDREN'S PHYSICAL DEVELOPMENTAL CLINIC
College of Physical Education, Recreation and Health
UNIVERSITY OF MARYLAND
College Park, Maryland
20742

WRJ/'68

I. History and Functions of the Children's Physical Developmental Clinic

The Clinic was organized in the spring of 1957 in response to a growing need in the Washington area for a program which would specialize in improving the physical fitness and/or coordination of sub-fit children--and particularly those generally considered in the "special education" category. Since that time attendance of children in the Clinic has climbed each semester from its original 26 to its present 200; and participation of volunteer "student-clinicians" has risen from 12 in 1957 to 85 (Fall, 1968). Since its beginning the Clinic staff has worked closely with the various medical and other therapists and educators who see the need for equipping children with a solid and disciplined physical base from which to operate in their therapeutic and/or educational development.

Orientation and Objectives

In the Clinic we are interested in improving certain aspects of the "total fitness for living" of children who are referred to us. Our approach is primarily in terms of physical activity, through which the child may: (1) gain greater awareness of the confidence in his body and what he can do with it; (2) acquire and/or improve basic skills which not only increase the range of his movement capabilities and satisfactions but also heighten his ability to function effectively in the activities of other children and thus provide a basis for the acquisition of greater social skill; and (3) increase the basic efficiency, stamina and power of his body-machine.

Physical and social values of these kinds are not hard to demonstrate as children become physically educated; but we also attach importance to another closely related value which is, perhaps, harder to demonstrate but is certainly not less important. That is, we believe that as a child sees himself become more able to do things, more able to direct and control his body, and more able to deal with his peers on their own level, he gains a new respect for himself. The picture he has of himself in his own mind undergoes change for the better--not through self-deception but through the objective data of performance. He begins to see himself as one who can deal more adequately and confidently with his life. (In the Clinic program some tests are given which, we believe, may demonstrate improvement in these children's "self-picture" as their performance level rises.)

The functions of the Children's Physical Developmental Clinic are to: (1) provide an exceptionally valuable training experience for interested students; (2) provide a laboratory for the conducting of research concerned with improving child fitness and with studying the effects of improved physical fitness upon the development and educational progress of the children referred to the Clinic; and (3) provide a unique service to the University community.

II. The Student Clinicians and Their Training

We attach the greatest importance to our student clinicians. These mature young men and women are expected to establish a friendly relationship with their children, study their children for their abilities and interests, and guide

them through sequences of activities which are geared to what they can do and what they can learn to do. The clinicians are especially trained as physical and/or health educators. They are aware that it is not their function to make their children dependent upon them for continued development of fitness, but to help the children and their parents to become increasingly able to continue with appropriate programs of fitness on their own.

And as the clinicians apply their intelligence and skill in the interests of the child, they also benefit. They increase their awareness of the range of human individuality and performance. Since no set of instructions or rules can be followed in dealing with the different children, the clinicians must adjust themselves to a particular child's developmental level, abilities and disabilities. They must think their way through the problems and situations which arise. Noteworthy, however, and perhaps rather uniquely, the student-clinicians are not asked to learn in the Clinic (although of course they do learn). They are asked to think. They are asked to think of ways to utilize their know-how in guiding their children to new levels of performance and self-appreciation. Moreover, they learn, perhaps as never before, of the close unity and interdependence of body, mind and social adjustment. And they see what a friendly, trained, guiding hand can help a child accomplish.

In staff conferences the clinicians have an opportunity to draw upon the experience of faculty members of the College of Physical Education, Recreation and Health and other consultants, and to discuss and share their experiences with one another.

III. The Clinic's Children

The children referred to the Clinic have symptoms which range from the mild to the very grave--that is, they range from such things as moderate obesity, more or less faulty movement skills, and some degree of difficulty in social adjustment to "brain damage", severe emotional disturbance and orthopedic disability. Thus, some are at a level where small group work is not only possible but very desirable; but others must have an entirely individualized program--at least during the early weeks of the Clinic session. However, common to all of the children referred to the Clinic is some fitness and/or coordination difficulty. In most cases the large-muscle movement problem is accompanied by small-muscle control problems such as those of the eyes and fingers; and these too are dealt with by means of special activities in the program.

Although the Clinic staff has the opportunity to consult frequently with medical and other specialists and special education personnel, the Clinic is not under medical supervision. However, prior to admittance to the program, parents must furnish evidence that moderate physical activity is not contraindicated for medical reasons.

IV. The Parents

In the Clinic we also attach the greatest importance to the parents of the children referred to us. They are taught how the interdependent factors (1) physical activity, (2) nutrition and (3) rest and sleep form the bases of physical fitness. They come to appreciate that good physical fitness tends to provide a solid foundation to support the child in other aspects of his development, including his school progress and social adjustment.

At the end of each period when their children are returned to them, the individual parents discuss developments and problems with their student-clinicians who make suggestions concerning activities and equipment which can be utilized in the home to further the child's program between Clinic sessions and when the Clinic experience is over.

We are often pleased at the way parents enter into the spirit of these suggestions and play a very worthwhile part in encouraging their children to carry out the daily activities suggested by the Clinicians, and in praising the efforts and successes of their children.

V. The Clinic Activities

A wide variety of gymnasium activities, conditioning and coordination exercises, games and modified sports are utilized by the student-clinicians in their pursuit of specific fitness-coordination objectives. The selection of just what activities to use depends upon the needs of the individual child. Thus, as soon as a clinician is assigned a child, he begins a careful evaluation of his physical status: the grace of his movements, the handling of his body in various activities, his skill in climbing and descending stairs, the evidence of fatigue brought on by running and climbing steps, and so on. Moreover, such psychological factors as the confidence with which the child addresses himself to various tasks, his willingness to try strange activities and his behavior when brought into contact with other children are carefully noted. A certain amount of simple but formal physical and psychological testing is done; but this is approached cautiously and in the spirit of fun and is never permitted to become a threat to the child or an opportunity for failure.

Unlike therapeutic programs which administer something to the child--be it medication or exercised--the Remedial Fitness Clinic approaches the problem with the point of view that pleasurable movement experiences are essentially meaningful to children; and that natural incentive plus friendly and skillful guidance can bring about self-rehabilitation. In other words, the child is a participant in his own treatment and is fully involved in it emotionally as well as physically.

Although there is a great deal of variation in the program developed to meet the needs of different children, they are all planned with an eye to: (1) getting at the specific difficulty for which the child was referred; (2) improving the child's basic fitness and movement skills; (3) encouraging a "fitness attitude" in the child and in his entire family which will make systematic physical activity palatable and which tends to encourage continuation of the program in the home and elsewhere; (4) helping the child to realize that his basic instrument--his body--can be brought under his control (with all that this implies for his self-assurance and his "self-image" or conception of himself); and (5) as needed, foster social skills and social adjustment through group activity in which the child becomes aware of his ability to function successfully with his peers even though his performance level is not high.

VI. Reasons for Referring Children to the Clinic

The Clinic experience tends to be valuable to any child: (1) whose problems are of a physical fitness or coordination nature and/or (2) whose major problems (e.g., obesity, faulty vision, emotional disturbance, mental retardation) involve inadequacy in physical fitness, coordination or basic sport and game skills.

VII. Procedures for Entering the Clinic

Although anyone who is in a position to observe and evaluate a child may refer him to the Clinic for consideration, the parents themselves should make the contact with the Clinic director who will discuss their child with them. A decision as to whether to admit the child is made on the basis of the appropriateness of the Clinic in relation to the child's specific needs. In the event that the Clinic is full to capacity at the time of an application, the parents will be asked to wait until the following semester.

The spring Clinic extends from approximately mid-February until late in April. The fall Clinic extends from approximately mid-October until about mid-December. The summer Clinic is a 6 week program which begins late in June. Application should be made as much in advance as possible.

The Clinic is non-profit and self-supporting. At present a fee of $20.00 is charged for the 8 week program to defray expenses involved in operating the Clinic, obtaining needed equipment and resource materials, and conducting research.

Warren R. Johnson
Professor and Clinic Director

Phone - 454 2626

THINGS THAT WE REQUEST PARENTS AVOID DOING

1. Speaking badly of the child, especially in his own presence (e.g., to clinician: "Do you think you can do anything with what you have to work with?" To the child: "Well, what did you do wrong today?").

2. Commenting on the child's "condition" carelessly in his presence. ("I don't know whether he's brain damaged or just emotionally disturbed.")

3. Bringing up events that happened at home which tend to make the child look bad. ("He wets the bed." "Her room's a mess." "He's such a sissy with the other kids." "He's so sloppy with his things.")

4. Criticizing the child's behavior in the Clinic.

5. In advertently undermining the clinician's efforts. (For example, clinicians have had children demonstrate some new achievement to their parents and the parents have immediately had a younger, more fit brother do the same thing easily. While a child is being sold on the idea of fitness, a parent may say: "Well I'm not fit and look at me. I'm getting along fine.")

6. Urging a child to really work hard "so as to get your money's worth."

7. Ignoring suggestions regarding activities, diet, etc.

CHILDREN'S PHYSICAL DEVELOPMENTAL CLINIC WRJ/'69

FOR CLINICIANS AND ASSISTANT CLINICIANS

1. The children come in for 8 sessions. (We don't guarantee 8 but try for 8.) There will be no sessions during the Easter holidays (2 Saturdays, 1 Wednesday). A 9th session is provided for make-ups.

2. You must make all special arrangements with your child's parents. Therefore, exchange telephone numbers with them immediately. Examples: (1) You are in a Saturday a.m. athletic event. You call the parent early in the week, stating that you can't be there and advising as to course of action; (2) Your child is ill. The parent calls you and tells you not to expect them.

3. If you know that you can't attend a session, do one of the following:
   a. Cancel your appointment with the child, especially if he has difficulty adjusting to other persons. Use the make-up session.

   b. Get a substitute clinician to work with your child in your absence. The substitute should be introduced to the child in advance and plans should be made as to how the parent is to locate the substitute, etc.

   c. In some cases, a child may be worked into another clinician's little group for a session. The other clinician must agree to this in advance and parents must be told who to look for, etc.

4. Make notes about your child's activities, progress and problems <u>each week</u> (consider social and emotional problems as well as physical). Be prepared to hand in a full report at the end of the 8 weeks. (We know you're busy but this information is very important for other persons working with the child and for future clinicians who will work with your child and will want to build on what you've done.)

5. Plan to find time to talk with your child's parents at the end of sessions and/or by telephone. They are not your boss; but you can learn from them. You can also give them valuable suggestions. (You don't really have a boss here, but in a sense your child is your boss.)

6. Meet regularly with your assistant clinicians if assigned one. In some cases your assistant will be with you almost constantly to help out. In other cases your assistant will assume major or at least considerable responsibility for a child. However, you are basically responsible for:

   a. Kinds of activities selected

   b. Communicating with parents

   c. Seeing that reports are written up by you and/or your assistant

7. Staff meetings are most important for gaining greater understanding of the children, getting help with special problems, for exchanging information generally. Be sure to plan to attend regularly. <u>TIME: 8:30 a.m.</u>

INSTRUCTIONS TO CHILD FITNESS CLINIC ASSISTANTS

1. Make friends with the child. His feeling toward you will have a great deal to do with his performance.

2. Make a game of the initial tests. (See test sheet). But use no tests that seem inappropriate to you.

3. Show the child the lab and small gymnasium. Observe his reactions to the environment, the gymnasium equipment and other individuals; and if groups are in action, observe your child's reactions as he watches them.

4. While you are testing your child you will probably notice certain activities which appeal to him. One of these will make a good starting point for your remedial fitness and skills work.

5. Expect progress to be slow, at least some of the time. When your child has successfully accomplished something, let him repeat it and enjoy it rather than rushing on to something else.

6. Be liberal with encouragement and praise achievement of any kind. Do not insist upon successful performance at first. Make a practice of praising some aspect of the child's performance before making suggestions for improvement.

7. Avoid too strenuous activity at first; and expect your child to tire quickly.

8. Be sure of the mechanics involved in the skills you teach so that your child will have the greatest likelihood of success.

9. In conference with the parent assign activities for home use. These should include some of the exercises taught during the period, hikes, running, games, etc., but emphasize fun.

10. After you have returned your child safe and happy to his parents, write up the experience in detail, making careful note of the child's attitude as well as his performance.

NOTE: Parents are to wait for you in the area of the office. They should not be present as you work with the child unless you invite them to an activity area for a special reason.

SOME OF THE GRAVER MISTAKES THAT CLINICIANS HAVE MADE IN THE CLINIC

(Bear in mind that the best of clinicians or workers in any field sometimes make mistakes)

1. A few children have been permitted to get lost.

2. Some have chatted with friends for appreciable periods of time instead of concentrating on the children.

3. A few have been insensitive to safety factors. That is, they have not safetied properly, have not utilized mats, have been careless with the trampoline rules.

4. Rarely, but it has happened, clinicians have moralized to or nagged at a child, many of whom get too much of this at home and at school.

5. A few have talked about their children's psychological or other problems in the presence of the children.

6. A few have become aggressive in response to a child's aggressiveness.

7. Many have personalized a child's failure to make hoped-for progress. Of course, a degree of such personalization is inevitable for any serious therapist or educator.

TRIED AND TRUE WAYS OF COMPLICATING YOUR CHILD'S ADJUSTMENT

1. Constantly scrutinize your child for his "faults" and mistakes.
2. Nag at him about neatness, cleanliness, etc.
3. Call him such things as: Fatty, Lard, Skinny, Awkward, Clumsy, Sissy, Coward.
4. Refer to him in his presence as: Retarded, Emotionally Disturbed, Brain Damaged.
5. Push the idea that your child should be a winner - a champion - even though his interest and/or ability may not make this reasonable.
6. Force your child into situations where he is likely to fail.
7. Elaborate, at length, on your child's alleged character and personality defects.
8. Fail to provide fruit and vegetables for convenient snack foods.
9. Reward your child with candy, pastries and other high energy foods so that these will seem unduly attractive to him.
10. Don't let him be himself - try to mold him in your own image of what he should be.
11. Fail to realize that developmental problems are often aggravated and sometimes even caused by the careless or thoughtless talking of adults.

Children's Physical Developmental Clinic
College of Physical Education, Recreation
and Health
University of Maryland
College Park, Maryland

CHARACTERISTICS OF OUTSTANDING CLINICIANS OF THE PAST

The outstanding clinicians have:

1. Made a practice of concentrating on their child or children throughout the period.

2. Been close and friendly but have remained objective (that is, they have been realistic as to what could be expected of the child and have not taken his failures as their own).

3. Always been safety conscious (leaving room, of course, for calculated risks).

4. Always had the child's difficulties in mind and have selected and modified activities accordingly.

5. Been very, very, very, patient.

6. Never made a moral issue of the child's performance, never using such words as sissy, yellow or bad.

7. Never threatened to "tell his parents on him". If a child gets out of hand temporarily no harm is done; but if his parents are told it may go on and on and on for him).

8. Been willing to ask for help in the staff meetings or from fellow clinicians (including Dr. Johnson) while in the gym.

9. Thought their way through therapeutic problems, using ingenuity and imagination to accomplish their objectives.

THINGS TO REMEMBER

1. A safety belt must be worn at all times by children when they are alone on the trampoline.

2. Anticipate possible hazards associated with all equipment. For example, fingers can be smashed by the scooters, feet can be caught between the bike pedals and the bike frame. Damage can be done even by the little plastic bats. Of course, mats must be placed under equipment from which a child might fall. (balance beams, ropes, rings, jungle gym, etc.)

3. NO CHILD SHOULD EVER BE WITHOUT SUPERVISION.

   (a) Every precaution should be taken to prevent the child's getting lost or injured.

   (b) Parents are supposed to deliver their children directly to you and be on hand to pick them up at the end of the period.

4. Make your own arrangements with your children's parents for the following:

   (a) Make-up sessions, (do your best to complete 8 sessions.)

   (b) Any sessions that you cancel. (You must call and advise them--there is no one else to handle this--and no one to take care of your children in your absence.)

SOME OF THE GRAVER MISTAKES THAT CLINICIANS HAVE MADE IN THE CLINIC

(Bear in mind that the best of clinicians or workers in any field sometimes make mistakes)

1. A few children have been permitted to get lost.

2. Some have chatted with friends for appreciable periods of time instead of concentrating on the children.

3. A few have been insensitive to safety factors. That is, they have not safetied properly, have not utilized mats, have been careless with the trampoline rules.

4. Rarely, but it has happened, clinicians have moralized to or nagged at a child, many of whom get too much of this at home and at school.

5. A few have talked about their children's psychological or other problems in the presence of the children.

6. A few have become aggressive in response to a child's aggressiveness.

7. Many have personalized a child's failure to make hoped-for progress. Of course, a degree of such personalization is inevitable for any serious therapist or educator.

MOVEMENT AND FITNESS DIAGNOSIS

CHILDREN'S PHYSICAL DEVELOPMENTAL CLINIC

6-18-63
WRJ

Because of the nature of the usual school setting, educators tend to think in terms of group evaluation procedures. For example, in the classroom, an entire class is usually tested at one time; and in physical education, careful planning can make possible the testing of large numbers of students in a relatively short time.

In the Clinic, the situation is quite different. Generally speaking, our children would not be in the Clinic if they could function adequately in the average school setting. They are with us for special help because of some physical, mental, emotional or social developmental problem or problems, and are in need of highly individualized attention. Group testing is out of the question as is, often, formal individual testing. Still, it is essential that all clinicians carefully evaluate the quality of physical movement and the physical fitness of their children--and that they make keen observations of their emotional responses and social adjustment.

Movement and fitness diagnoses are considered so important for the obvious reason that they provide you with the basis for a program for the child. Suppose, for example, that your child becomes tired after walking up a flight of stairs, cannot pull himself up and over a bar or guard railing, cannot easily walk on a line or on the low balance beam, etc. You know immediately that your program must include (fun) activities which will improve basic motor fitness.

Suppose that you observe that your child "flops" his feet awkwardly as he walks, that he points the toes outward markedly, that his total body movements are not smoothly coordinated as he walks and runs, that his arm action reduces the efficiency of his movements, that he lifts and pushes incorrectly, that he puts the wrong leg forward when he throws a ball, that he does not move easily with a ball thrown to him, etc. You know immediately that your (fun) program for the child must include training in correct body mechanics. (You must be "up on" this matter of analysis of movement. It's the meat and potatoes of movement therapy.) As a child becomes more capable of skilled movement, he gets new confidence in himself as a

person who can do what other people can do and thus "be in on" the activities of his peers. All this has profound implications for mental health and social adjustment.

Now, suppose that your child has difficulty "mirroring" your movements when you stand in front of him and put your arms and legs in different positions, that the wrong part of his body responds when you ask him to move the part of his body that you touch, that he cannot switch easily from bilateral to unilateral activity as in crawling and hopscotch. You realize immediately that there is some neuromuscular disorder which needs special attention.

Suppose, finally, that your child shows evidence of fear as you take him down the stairs (a flight of stairs can be terrifying to a child who is lacking in confidence in his body's ability to deal with it--and to a child with visual perceptional problems who sees the stair well as a dark chasm), as you first enter the gymnasium, as he is confronted with new equipment, as he responds to you verbally and otherwise, and as he responds to other persons and activities in the Clinic environment. You know immediately that you must devise ways of patiently building confidence through series' of success experiences in individual and small group situations.

These are some of the kinds of things that you need to notice and make notes on concerning your children as soon as you meet them. They form the basis of your future activity planning. They also form the basis of your future evaluations of the children's progress, which are so important to our evaluations of the entire Clinic operation.

Here is a challenge that I like to make to Clinicians. In terms of all the things we've been talking about in this discussion of "Movement and Fitness Diagnosis" <u>how much can you learn about a child from the time you first meet him at the front of the building to the time you enter the gymnasium at the rear of the building</u>?

What are the resources available to you between the front of the building and the gym for observing the motor fitness, body mechanics, neuromuscular control (large and small muscle), emotional reactions and special adjustments of a child? Study the situation, perhaps meet the child with a ball in one hand, and see what you can do.

CHILDREN'S PHYSICAL DEVELOPMENTAL CLINIC
College of Physical Education, Recreation and Health
University of Maryland
College Park, Maryland

ELEMENTARY BODY MECHANICS

WALKING

Involves transferring the weight from one foot to the other. The leg swings forward from the hip. The heel is placed down first, the outer half of the foot next, and the push-off is from the toe, which points straight ahead. This should be done in even rhythm.

Common Walking Faults:

1. Leans the body forward before the leading foot strikes the ground in front of the body.
2. Exaggerates the shifting of the weight to the supporting leg which produces an exaggerated movement of the hips to the side.
3. Swings the arms in a wide arc.
4. Swings the arms at the elbows.
5. Carries the weight on the rear foot. When the lead foot strikes the ground, the body should be ready to be driven forward by the rear foot.
6. Bobs up and down which is caused by exerting force straight up from the rear foot rather than pushing diagonally forward.
7. Looks at the feet--the eyes should be straight ahead.
8. Slumps and fails to maintain good balance.

RUNNING

Also involves transferring the weight from foot to foot and is an even rhythm, but the rate or speed is increased. The toe, still pointing straight ahead, touches the ground first. The body is momentarily suspended in the air, unlike the walk, in which contact is always maintained with the ground. Before making an actual evaluation of the individual's running skills, it should be pointed out that efficient running is a complicated skill and that many people have learned to run without instruction and have not developed a form which will give them the greatest speed with the least possible effort.

Check List:

1. Does the runner lean forward at an angle of approximately 65 degrees?
2. Are the hands brought back and forth alternately with the legs rather than brought across the body?
3. Is the head held in line with the body?
4. Is the upper body aligned with the lower part of the body?
5. Is the stride the correct length for the build of the runner and the potential power of the leg drive?

6. Are the toes pointing straight ahead?

7. Are the legs brought straight forward and backward?

8. Is the body brought forward of the lead foot when it comes in contact with the ground?

IMPROPER ANGLE OF THE BODY

Most runners who do not run at the proper angle throw their head back and hold the body too erect. To correct this fault, the instructor has the child assume a correct angle by supporting himself against a wall. He stands the necessary distance from the wall and then leans toward it, leaning forward from the ankles, and places his hands upon the wall. This gives the student a kenesthetic feeling of the correct angle at which to carry the body. He will need to understand that only when he is driving hard with his legs will he be able to assume this angle while running. The running which the child does after the above instruction should be carefully checked by the instructor and further suggestions offered as needed. Some children will attempt to attain the correct angle by bending at the hips. This is incorrect, for the lean must come from the feet.

IMPROPER USE OF THE ARMS

The improper use of the arms is a frequent error in the running form of individuals. If the arms are carried too low, the child should be instructed to raise them until the angle at the elbows is about 90 degrees.

If the child is crossing his arms over the chest in running, a rotation of the upper part of the body will be produced. This, of course, hinders top performance in running. To correct this fault, the child may practice the proper form with exaggerated movements of the arms while jogging around the track. Early in the reeducation of the arms, it may be helpful for the child to visualize mentally that he is reaching forward to grasp something elastic; he pulls it back and then lets it go before reaching for it again with the other hand. After the arm movement is well established with conscious exaggeration, the child will usually find himself using the proper form with just the required emphasis as he reaches full running speed.

FAULTY USE OF THE HEAD

There are two form faults which beginners will demonstrate in the use of the head while running. The head will either be permitted to flop back and forth or it will be thrown back too far.

The first of these faults is frequently the result of incorrect use of the shoulders and arms. Correction of these movements will stop the flopping movements of the head. Correction for throwing the head too far back consists of establishing the proper body angle. Frequently when a runner is throwing his head back, he is doing so because of his excessively erect position.

IMPROPER BODY ALIGNMENT

An improper alignment of the body is caused by crossing the arms in front of the body, which produces trunk rotation, or by the runner's attempting to establish the proper lean by bending at the hips. The methods already discussed in connection with these two faults should be used to achieve proper body alignment.

FAULTY STRIDE

The errors made most frequently in the stride are: overstriding, failing to stride far enough, toeing out, and throwing the legs out to the sides. The last error in the list is committed more commonly by girls than by boys.

A runner is overstriding when the center of the weight of his body is behind the foot when he places it on the ground. The remedy is to practice with a shortened stride. A stride that is too short produces a choppy, uneven gait. The child should be encouraged to strive continually to increase the length of his stride.

Toeing out actually cuts down the length of the stride. To correct this difficulty, the runner should practice consciously toeing straight ahead while jogging. When the correct movement begins to feel familiar, he may increase the speed of his running while continuing the conscious effort to toe ahead.

When the runner's fault is that of throwing the legs out behind or throwing them to the sides, he must practice with extreme effort on the correct movement while running at a slow pace. When the new movements no longer feels strange, the child may increase the speed of the run.

LEAPING

Is even as to rhythm and like a slow run except for one essential difference. That is, the push-off is up and then forward, with a feeling of suspension, "up and over." The child should land on the ball of the foot and bend the knee to absorb shock.

JUMPING

Is accomplished by pushing off with both feet and landing on one or both feet, or pushing off with one foot and landing on both feet. The jump is even in rhythm. In order to avoid injuries, a child should be shown how to land with flexed knees and on the balls of the feet before he jumps.

HOPPING

Involves more balance than other locomotor activities in that the takeoff is from one foot and the landing on the same foot. Balance must be maintained through use of the arms and a redistribution of the total body weight. The rhythm is even. Again, correct landing to absorb shock should be stressed.

SKIPPING

Can be taught from the walk. A strong push-off should be emphasized. The push-off should be such a forceful upward one that the foot leaves the ground. In order to maintain balance, a hop must be taken. The sequence is step, push-off high, hop. This hop occurs on the same foot that was pushing off, and this is the skip. It is uneven in rhythmic nature because it involves two actions, a strong or long one (step) and a weak or short one (hop).

GALLOPING

Can be explained by pretending one foot is injured. A step is taken with the lead leg, but the "injured" one can bear very little weight and is brought up only behind the other one and not beyond it. A transfer of weight must be made to the lead foot. Thus a fast limp is really a gallop, uneven in rhythm.

SLIDING

Is much the same as the gallop, but movement is in a sideward direction. One foot is drawn up to the lead foot; weight is shifted from the lead foot to the drawing foot and back again. This movement is uneven rhythmically.

THROWING AND STRIKING SKILLS

All highly organized games have as their basis some throwing or striking skill. Generally these can be classified as underarm, sidearm, and overarm swing patterns.

In rolling a ball, the child is using a type of underarm swing pattern, as he does in a two-hand underarm throw, or later a one-hand underarm throw. Later, it is used in bowling, for example, and in striking activities.

A two-hand sidearm throw will progress to a one-hand sidearm throw, as used in dodgeball, and will be seen later in batting a softball. Later, it is used in a striking activity, such as a tennis forehand drive, or in throwing activities.

A two-hand overhead throw graduates into a one-hand overarm throw. This swing is also used in both throwing and striking activities. Generally, the same principles are involved in all of these skills. The body weight is shifted into the movement and one part of the body balances another part. The force is exerted in the desired direction through the center of the object, and as much of the body is used as possible. All of these actions influence direction, force, and distance, the main concerns in throwing and striking activities.

Emphasize footwork and body control and the proper grip in throwing the ball. He should be particularly alert to the position of the elbow during the throw since beginners tend to bring it in close to the body rather than keeping it well out and at shoulder level. Speed and accuracy in throwing the ball should be increased in each practice session.

CATCHING

Whether the object is caught with the arms and body or only the hands, the child should be taught to "give" with the catch, thus absorbing shock. An elementary school child surrounds the ball until he is capable of using his smaller hand muscles. His hands should be used as a basket, not as a backboard or rebounding surface.

Getting in position to make the catch and the position of the hands in receiving the ball are the most important factors to be stressed in teaching how to catch.

AXIAL MOVEMENTS

These movements refer to bending and stretching, rising and falling, twisting and whirling, swinging and swaying, beating and snaking, and the like. These movements are usually performed with a part of the body remaining as a fixed base to the ground. For example, in swinging the arms one or both feet may provide the fixed base. These movements can be done with parts of the body or the whole body in gross movements. They can be combined with locomotor movements, as in dodgeball, for example.

STANDING POSTURE

Using a mirror will help the children get the correct concept of good posture and may act as a motivator to work for better posture. To correct poor posture, the instructor must help the child find the cause, but in making the analysis the instructor must remember that good posture is dictated by body build. Some poor posture is contributed to by muscular weakness, and strengthening the muscles may promote better posture. However, postural habits that have existed over a number of years cannot be changed by participating in postural exercises for a few minutes each day. Exercises are only an aid in creating better posture. A desire to overcome poor posture coupled with constant awareness of what constitutes good posture is far more essential.

To give the student the kinesthetic feeling of the posture best suited to him, have him perform the following:

1. Look straight ahead, chin in (avoid saying "Throw the head back")
2. Hold the shoulders wide (avoid saying "Throw your shoulders back")
3. Place the pelvis well under the spinal column.
4. Place the feet straight ahead.
5. Do not lock the knees.

References:

1. Vannier and Fait, Teaching Physical Education in Secondary Schools, New York: Saunders Co., 1957.
2. Humphrey, Elementary School Physical Education, New York: Harper, New York, 1958.

COMMON DEFINITIONS AND SOME CHARACTERISTICS OF DIFFERENT TYPES OF CHILDREN REFERRED TO THE CHILDREN'S PHYSICAL DEVELOPMENTAL CLINIC

The following are definitions from Webster's dictionary. These definitions are useless when dealing with an individual child; but they indicate in very general terms what is commonly meant by the terms.

Retardation--Slowness of development or progress. Delayed, retarded; delayed or impeded in progress.

Mongolism--A congenital malformation, in which the child has slanting eyes, a large tongue, and a broad short, skull. (The recommended terminology today is "Down's Syndrome").

Brain Damaged--No definition in Webster. Other terms used: brain injured, neurologically impaired. This has reference to injury to the brain due to such things as a physical blow, pressure, hormonal malfunction or chemical poisoning.

Cerebral Palsied--A disability due to damage of centers of the brain before or during birth resulting in imperfect control of the muscles and marked especially by muscular incoordination, spastic paralysis, and speech disturbances. (It is estimated that more than half of the cerebral palsied are retarded.)

Autism--"Absorbtion in phantasy to the exclusion of interest ir reality. (Severe childhood schizophrenia - psychosis)

Neurosis--A functional nervous disorder without demonstrable physical lesion (or evidence of tissue damage).

Psychosis--Mental disease, any serious mental derangement - a purely psychiatric term without the legal implications of the word "insanity".

Following are some useful "functional" definitions of behavior manifested by some of the children you may have contact with.

Hyperactive--This is a symptom which, in varying degrees, is common among "retardates", brain injured", "emotionally disturbed", and excited "normal" children. Usually the child is extremely active and in some cases will go from one activity to another within minutes or even seconds. In some cases the child may move about constantly without awareness of danger. That is, he may run in front of a swinging bat or a moving bicycle. The clinician should realize that the constant movement and short attention span may to some degree be "out of control" behavior - and do not represent an effort to irritate or annoy.

In many of our cases these symptoms have improved as the children have begun to enjoy physical activities. With patient work the attention span can often be extended and increased control acquired. The need for perpetual motion declines.

The clinician should not be in a hurry to achieve improvement. As the child expresses interest in specific activities, these should be utilized as a means of helping to extend his attention span, "slow down" and enjoy the improvement of his skills.

Hypoactive--This may also apply to the retarded, brain injured, emotionally disturbed and "normal".

The child may appear extremely "sluggish" possibly uninterested in any of the gymnasium activities (this may be due to some medication and you should check with the parent about this. The clinician's job is to note carefully any interest that the child has or takes in specific things or activities, do whatever possible to make the experience successful and rewarding. When this is accomplished the child's desire for more activity can be expected to grow.

Aggressive--This may also apply to all "types" of children.

Very rarely does the aggressive child invent this behavior by himself and very rarely is this behavior directed at the clinician personally. Usually the aggressive is a reaction to another environment in which he is the victim of other people's hostilities or which demands more than he feels capable of performing. Aggressive behavior may in some cases be an attention gaining device. The child is often in a situation which is too competitive or in which he is expected to perform beyond his capacity. Hostile and aggressive behavior may be the only means he knows to express his feelings about such situations.

Clinicians can greatly help these children by: (1) always trying to insure the child's success, (2) never being aggressive toward the child in a personal way just as you should not take the child's aggression personally, (3) attempting to always deal with the child's aggression rationally - not emotionally, not moralistically. (In other words if he has to be restrained so as not to hurt someone or himself, restrain him but do not moralize about his behavior. Recognize aggressive behavior for what it is very likely to be - an out of control state and a reaction to the environment), (5) serving as or providing a punching bag. (For example, some children will beat on a block or pound a ball or other object for extended periods. Bear in mind that everyone needs opportunities to blow off steam and with some of these children the need is very urgent.)

EASY WAYS FOR CLINICIANS TO GET THEMSELVES FINED, INCARCERATED AND PERHAPS DRAWN AND QUARTERED

10-25-69
WRJ

1. Don't use judgement -- when and when not do you push skills teaching.

2. Crank, nag, fuss at kids -- for example, about putting on or tying their shoes, keeping busy, being polite, prompt, clean, etc.

3. Fall in with the things the child is being bugged about during the rest of the week, eg., learning to write, using the right hand, etc.

4. Steal the show from the child -- eg., insist on using the trainer telephones instead of letting the child use them, get personally involved in winning the games, etc.

5. Tell on kids to parents or to a new clinician so as to keep a "bad" reputation alive, eg.: "He throws tantrums" -- or other forms of character assassination as is so often practiced in teachers' lounges.

6. Decide that a child is so "bad" or difficult that you can't stand him for that one hour of the week.

7. Do all of the talking, don't listen to the child.

8. Don't do everything possible to make things fun. Wear a long, unhappy, put-upon expression.

9. Belittle one child in an effort to build up the ego of another.

10. Diagnose and refer ("your child is a problem you should take him to a psychiatrist")

11. Upset and/or confuse parents with messages like: "your child doesn't fit into the group."

CHAPTER V

Reference Materials and Resource Information

PART ONE

EXAMPLES OF BEHAVIORS TO BE DEVELOPED AND SUGGESTIONS FOR PHYSICAL AND RECREATIONAL ACTIVITIES

Examples of behaviors to be developed and physical and recreational activities to develop the given behaviors are offered as suggestions for aides; volunteers; parents; support personnel; nurses; physical educators; occupational, physical, corrective, recreational and speech therapists; psychiatrists; psychologists, counselors; social workers and physicians who are members of the rehabilitation-education team.* The suggestions are not intended to be comprehensive or to be used in toto for all people but rather, are offered as catalysts for other ideas or suggestions to be selected for a particular individual after careful consideration by members of the team. Behaviors and activities are presented for the following program goals for the participant: a) optimum arousal levels, (b) enhanced response to and discrimination of sensory stimuli, c) efficient motor-perceptual skills to learn about environment, d) increased independence, e) efficient self-help and activities of daily living skills, f) mature social interaction, g) effective communication abilities, h) improved physical growth and development, and i) personal fulfillment and enhanced amusement.

A. OPTIMUM AROUSAL LEVELS

Behaviors	Activities
Adequate alertness to surrounding environment	Therapeutic techniques** prescribed by rehabilitation-education team
Sufficient arousal for participation but not over-arousal	Therapeutic techniques, relaxation techniques
Response to sensory stimulation	Therapeutic techniques, crib toys, mobiles
Motivation for participation	Therapeutic techniques, reinforcement of response

B. ENHANCED RESPONSE TO AND DISCRIMINATION OF SENSORY STIMULI

Behaviors	Activities
Reacts to temperature changes	Therapeutic techniques, exposure of skin to icing and thermal variations, ice cube play

*Some of the behaviors and activities are adapted from D. Geddes, *Physical Activities for Individuals with Handicapping Conditions*, C.V. Mosby Company, St. Louis, Missouri, 1974.

**Specific therapeutic suggestions made by a team member for a particular participant; i.e., eliciting a startle reflex by a sudden light or sound.

Behaviors	Activities
Receives tactual input	Therapeutic techniques, toweling, brushing, stroking and tapping, mud pie play, water play
Responds to light, colors and shapes in environment	Therapeutic techniques, presentation of diverse sensory stimuli for response and discrimination
Reacts to auditory input	Therapeutic techniques, verbal communication
Recognizes kinesthetic feelings about body	Holding, restraining, positioning, and physically moving body and body parts through movement patterns
Perceptual abilities-- . Visual perception (visual acuity, oculo-motor efficiency, spatial awareness visual tracking, depth perception, figure-ground relationship, color recognition, form discrimination)	Perceptual motor activities [There are numerous programs and evaluative criteria which might be employed. Information and bibliographical references for these activities are provided in the book Annotated Bibliography on Perceptual-Motor Development published by the American Alliance for Health, Physical Education and Recreation. This is annotated in Part Two, section on "Physical and Recreational Activities," page 25 of this guide].
. Auditory perception (sound localization, rhythm discrimination, figure-ground selection)	"
. Tactile perception	"
. Kinesthetic perception	"
. Intersensory integration	"

C. EFFICIENT MOTOR PERCEPTUAL SKILLS TO LEARN ABOUT ENVIRONMENT

Behaviors	Activities
Has head control	Attention getting devices
Rolls from back to front and vice versa	Therapeutic techniques prescribed by rehabilitation-education team
Goes from lying to sitting positions	Therapeutic techniques, mat work

Behaviors	Activities
Sits with support	Therapeutic techniques, sits by positioning with pillows, stuffed animals or inflatables (see attached reprint)
Sits without support	Toy play, feeding activities, rocking boats
Creeps and crawls	Toy play, motivational techniques, going through tunnels and boxes
Pulls up on furniture or objects	Innertube play, toy play, chair play
Stands with support	Standing table play, therapy sessions
Stands without support	Toy play, arts and crafts, spectator activities, therapeutic techniques
Walks with support	Therapeutic techniques
Walks without support	Walking forward, sideward, backward, on toes and in different speeds and directions, follow-the-leader games, walking on lines
Climbs stairs with support	Therapeutic techniques
Climbs stairs without support	Motivational and therapeutic techniques
Manipulation of objects-- . Has eye hand coordination . Reaches, grasps, holds, and releases . Transfers an object from one hand to another and from one place to another . Has preferential handedness	Coloring, block building, puzzle building, cutting paper, stacking rings, placing spools over nails, snapping clothespins around edge of can, self-care skill practice, stringing beads, toy play, throwing activities, play dough activities, drawing, painting, transferring of objects, doll play

D. INCREASED INDEPENDENCE

Behaviors	Activities
Improved self-direction and initiation of tasks	Arts and crafts, hobbies
Makes decisions	Many physical and recreational activities

Behaviors	Activities
Continues and completes tasks more independently	Arts and crafts, hobbies, many physical and recreational activities

E. EFFICIENT SELF-HELP AND ACTIVITIES OF DAILY LIVING SKILLS

Behaviors	Activities
Buttons and unbuttons	Practice sessions, creative drama, story plays, developmental activities, activities with small equipment, rhythms, relays, games, use of skills in everyday living
Opens and closes snaps	"
Opens and closes zippers	"
Ties and unties knots or bows	"
Puts on and takes off boots, shoes, socks, mittens, gloves, and wearing apparel	"
Toilets himself semi-independently or independently	"
Drinks juice or liquids from fountain, glass or cup	"
Eats finger foods or eats with tableware	"
Carries out personal grooming such as brushing teeth, combing hair, washing hands and face and wiping nose	"
Cleans and maintains clothing	"
Puts toys away and maintains own personal area in room	"
Exhibits safety skills such as awareness of fire hazards, proper use of toys and equipment, safe behavior on bus, identification and knowledge of traffic signals and signs, and water safety	"

F. MATURE SOCIAL INTERACTION

Behaviors	Activities
Progresses *from* independent play, parallel play, co-operative play *to* group play	Toy play, recreational activities, water play, sand box play, stunts, dual activities, relays, rhythms, game situations
Recognizes limits of environment and respects property	Activities with large and small apparatus, aquatics, games and relays with boundaries and lines
Shows desirable social skills such as following directions, taking turns, sharing with others and getting along with others	Game situations, relays, arts and crafts, group activities
Uses proper social words	Use of words such as "thank you", "hello", and "good-bye" in role playing, game situations, in every day living, and story plays
Uses self-control such as discriminating right from wrong, accepting correction, controlling undesirable behavior, appropriate releasing of emotional feelings	"Show and Tell" sessions, isolated and quiet periods, large muscle skill play, game situations, group play, punching bag, finger painting, puppetry, story plays, running, creative dance
Accepts responsibility	Putting equipment and toys away, finishing tasks, feeding fish and pets, watering plants, game situations with rules

G. EFFECTIVE COMMUNICATION ABILITIES

Behaviors	Activities
Focuses attention on speaker with eye-to-eye contact	Story plays, listening to person reading a book
Understands and employs facial expressions and physical gestures	Role playing, creative drama, rhythms, mirror play
Listens and responds to oral language in addition to recognizing different meaning in various tones and pitches in speech	Story plays, visits to theatre and motion pictures

Behaviors	Activities
Verbalizes what he is doing as he does it	Arts and crafts, physical activities
Recognizes labels and names of objects	Activities with large and small equipment
Verbalizes desires, feelings and has a communicative dialogue	Rhythms, singing, "Show and Tell" sessions, puppetry
Imitates actions, sounds, and words	Rhythms, story plays, puppetry
Uses reading and purposeful communication	Reading posters, signs, cards, and books in the physical/recreational activity situations
Uses printing and writing for purposeful communication	Writing or printing on posters and signs to be used in the physical/ recreational activities
Spells adequately for use in writing and reading	Reading, writing or printing as above

H. IMPROVED PHYSICAL GROWTH AND DEVELOPMENT *

Behaviors	Activities
Runs	Running in different speeds and directions in games, relays, tag, movement exploration, rhythms
Jumps	Obstacle course, jumping board, trampoline, air mattress, innertube, jumping rope, tire play
Hops	Relays, rhythms, movement exploration
Slides	Rhythms, creative dance, basic movement activities
Pedals tricycle or bicycle	Free play, relays, obstacle course
Balances on objects or apparatus	Balance beam, homemade equipment

*Earlier motor behaviors are given in Section C to present sequential stages that are usually observed in motor development. A checklist based upon these behaviors will indicate functional levels of each person in this area.

Behaviors	Activities
Skips	Locomotor activities, rhythms
Gallops	Locomotor activities, rhythms
Pushes and pulls	Body mechanics, toy or wagon play
Kicks	Ball play, small equipment play
Throws	Two hand and one hand ball throwing, beanbag games, small equipment throwing
Catches	Stopping rolling ball, chest catch, two hand catch, one hand catch, change from large to small objects in catching
Bounces ball	Two hand and one hand bouncing, games, relays, movement exploration
Strikes objects	One hand, two hand striking without and with implement
Performs specific movement patterns	Game situations, relays, rhythms, developmental activities, individual and dual activities, aquatics
Exhibits adequate physical fitness competencies-- . Static, explosive, and dynamic strength . Cardiovascular-respiratory endurance . Flexibility . Static and dynamic balance . Multi-limb and gross body coordination	Physical fitness activities, practice sessions, semi-competitive events, physical activities

I. PERSONAL FULFILLMENT AND ENHANCED AMUSEMENT

Behaviors	Activities
Expresses himself	Creative drama, movement exploration, rhythms, arts and crafts, puppetry, story plays

Behaviors	Activities
Has feelings of success and accomplishment	All physical and recreational activities, camping, hiking, nature trails, variety shows, table games, parties, Halloween parade
Enjoys himself	Field trips, Easter Egg Hunt, community excursions, theatre and motion picture trips, games, circuses, trips to zoo, picnics, community recreation, visiting entertainment, hobbies, clubs, winter activities, special events, special interest groups
Has improved self-concept	Success in physical and recreational activities, mirror activities, rhythms, identification of body parts, movement of body and body parts.

PART TWO

ANNOTATED LIST OF REFERENCES

Part Two presents a list of references which were selected after a review of available information.* The majority of the references are annotated and listed in the following sections: a) General Information and Educational/Training Programs, b) Educational/Training Programs Which Describe Physical or Recreational Activities, c) Physical and Recreational Activity Programs, d) Equipment and e) Evaluation.

A. GENERAL INFORMATION AND EDUCATIONAL/TRAINING PROGRAMS

1. AMERICAN Association on Mental Deficiency. *Mental Retardation--Improving Resident Care for the Retarded.* Washington, D.C.: the Association, 1965.

2. BAUMEISTER, Alfred, editor. *Mental Retardation.* Chicago, Illinois: Aldine Publishing Company, 1967. $12.50.

3. BENOIT, E. "More Fun for Institutionalized Retarded Children." American Journal of Mental Deficiency 58: 93-107; July 1953.

4. BENSBERG, Gerard J. and Charles D. Barnett. *Attendant Training in Southern Residential Facilities for the Mentally Retarded: Report of the SREB Attendant Training Project.* Atlanta, Georgia: Southern Regional Education Board, 1966.

   Report of a five-year project sponsored by the Southern Regional Education Board which gives guidelines for attendant training in institutions for the retarded. Includes curriculum development, organization and implementation of programs, evaluation, summary and resource materials.

5. CENTER for Developmental and Learning Disorders. *Minimum Standards for Activity Programs for the Retarded.* Birmingham, Alabama: University of Alabama Medical Center, n.d.

   Standards for activity or training centers (day care centers) to be established for the retarded, including the profoundly mentally retarded and the multiple handicapped. These community programs emphasize self-care, social and vocational skills.

*This list includes some references which are related or applicable to programing for severely and profoundly retarded persons even though these materials or publications do not deal specifically with this handicapping condition.

6. DECKER, Harold A. *A System for Planning and Achieving Comprehensive Health Care in Residential Institutions for the Mentally Retarded.* Ann Arbor, Michigan: The University of Michigan, (Dept. of Health Development) 1970.

Comprehensive programing for residential institutions. Section on Evaluation of the Resident's Clinical Status assists in establishing functional levels of participants.

7. DISTRICT of Columbia Public Schools. *Special Education: The Severely Mentally Retarded.* Washington, D.C.: District of Columbia Public Schools, 1965.

8. FRANKEL, Max, William F. Happ and Maurice Smith. *Functional Teaching of the Mentally Retarded.* Springfield, Illinois: Charles Thomas Publishers, 1966.

Part I describes teaching principles and practices: objectives of curriculum, characteristics of children, methodology, learning theories, motor activities, perceptual training, motor-perceptual integration and case histories. Part II describes areas of instruction: physical-perceptual developmental stages. Basic levels are related to physical education activities.

9. GROSSMAN, Herbert J., editor. *Manual on Terminology and Classification in Mental Retardation.* Washington, D.C.: American Association on Mental Deficiency, 1973.

Technical information on terminology and classifications, including definitions, in mental retardation based upon up-to-date knowledge, research and clinical experience in the field nationally and internationally.

10. HUNTER, Marvin, Helen Schucman and George Friedlander. *The Retarded Child from Birth to Five.* New York, New York: The John Day Company, 1972.

Program at the Shield Institute (New York) reviewed and comprehensive diagnostic procedures and treatment programs outlined. Some sensory-motor information given.

11. HUTT, Max L. and Robert Gwyn Gibby. *The Mentally Retarded Child: Development, Education and Treatment.* Second Edition. Boston, Massachusetts: Allyn and Bacon, Inc., 1965.

Authors believe that every retardate can have a meaningful and productive place in society, if society is willing to offer him appropriate opportunities to develop his full potential and to offer him suitable guidance and training. Discussion is given to problems of educational administration, organization of classes, general and specific methods of teaching, special learning problems and application of learning theory.

12. JERVIS, George A., editor. *Expanding Concepts in Mental Retardation.* Springfield, Illinois: Charles C. Thomas, Publisher, 1968.

Presentations made at the Third Bi-Annual Scientific Symposium on Mental Retardation sponsored by The Joseph P. Kennedy Jr. Foundation, in Boston, during April 1966. Papers presented included: genetics of mental retardation; deprivation factors in mental retardation; operant techniques in mental retardation; rehabilitation in mental retardation; and physical performances of the mentally retarded. (The latter category includes "Recreation for the Severely Mentally Handicapped" and "Current Status of Research on Physical Activity for the Retarded.")

13. JOINT Commission on Accreditation of Hospitals. *Standards for Community Agencies.* Chicago, Illinois: Accreditation Council for Facilities for the Mentally Retarded (875 N. Michigan Ave.), 1973.

Standards applicable to all agencies that provide non-residential services, including generic agencies that serve persons with developmental disabilities: case finding, follow along, individual program plan, client program coordination, protective services, advocacy, guardianship, community education, prevention, program evaluation and research. Also standards for individual assessment, health needs, developmental needs, employment and work and program administration.

14. KIDD, John W. *Curriculum Guide: Trainable Mentally Retarded Children and Youth.* Rock Hill, Missouri: St. Louis County Special School District, 1966.

Objectives, implementing experiences, and resources in four areas of development are presented for trainable mentally retarded children (ages 6 to 21) on primary, intermediate, and advanced levels. Social development includes adjustment, self-care skills, environmental orientation, and leisure time activities; physical development covers conditioning exercises, motor skills, structured play, and evaluation; development of intellect treats language arts, number concepts, arts and crafts, and music; and occupational development includes homemaking and job training.

15. KIRK, Samuel A., Merle B. Karnes and Winifred D. Kirk. *You and Your Retarded Child.* New York, New York: MacMillan Company, 1955. $1.50.

16. LARSEN, Lawrence A. and William A. Bricker. *A Manual for Parents and Teachers of Severely and Moderately Retarded Children.* Nashville, Tennessee: George Peabody College (IMRID), 1968. $1.00.

Instructional booklet for the education of parents or teachers who will be working with lower-functioning retarded children. Part One

describes behavioral evaluation and behavior modification. Part Two specifies activities in self-care, activities of daily living, communication, and imitation of movements and words. Easily readable and useful outline for the education and training of severely/moderately retarded children.

17. MEYERS, Elizabeth S. *The Kindergarten Teacher's Handbook.* Los Angeles, California: Gramery Press, 1973. $3.00.

Foundational information on testing and teaching kindergarten level skills, including perceptual-motor. Teaching methodology and behavior management given.

18. MICHIGAN Department of Education. *Manual for Operation of Day Care Training Centers for the Severely Mentally Impaired.* Lansing, Michigan: Michigan Department of Education (Special Education Services Area), May 1973.

Administrative rules, policies and guidelines for day care training programs for severely and profoundly retarded persons.

19. NISHBALL, Patricia and Allan Barclay. "Day Training for the Profoundly Retarded." Mental Retardation 8: 4: August 1970.

The establishment of the Child Development Day Activity Center, Cardinal Glennon Memorial Hospital for Children, St. Louis University, is described: Purpose, goals, activities, methodology and information regarding types of profoundly retarded children.

20. OGG, Elizabeth. *Securing the Legal Rights of Retarded Persons.* Public Affairs Pamphlets, New York, New York: Public Affairs Pamphlets (381 Park Avenue, South, 10016) 1973. 35¢.

Prepared in cooperation of the President's Committee on Mental Retardation, this pamphlet gives case histories and discussion concerning legal aspects of education, training, vocation, legal counsel, and other legal rights of the mentally retarded.

21. PAINTSVILLE Board of Education. *Curriculum Guide for Trainable Mentally Retarded.* Louisa, Kentucky: Eastern Kentucky Educational Development Corporation, 1968.

History and identification information for the trainable mentally handicapped. Each area presents importance of unit, objectives, an outline of content, sources of information, evaluation techniques, and work-study skills integrated into the unit. Included are self-care, economic usefulness, language development, social adjustment, music, arts and crafts, and physical education.

22. PITTSBURGH University. *Pilot Workshops Utilizing the Simulator and Training Materials Developed for In-Service Programs for Leadership Personnel Employed in Residential Institutions for the Mentally Retarded.* Pittsburgh, Pennsylvania: Pittsburgh University, August 31, 1971.

Described is the development and field testing of a set of simulation training materials, the Shannon Materials, to train management personnel of residential institutions for the mentally retarded. Defined and discussed is simulation as a training method. The materials are described as including slide-tape presentation of a real community and a real state school and hospital.

23. PRESIDENT's COMMITTEE ON Mental Retardation. *Current Issues in Mental Retardation.* Washington, D.C.: Government Printing Office, 1971.

Report of 1970 Staff Development Conference of the President's Committee on Mental Retardation. Topics included information on etiology, condition and effects of mental retardation. Discussion of developmental evaluation of pre-school aged children.

Presentation on rubella and resulting handicapping conditions such as multiple handicapped.

24. _____. *MR 72: Islands of Excellence.* Washington, D.C.: Government Printing Office, 1973.

Report which presents a variety of national, state, regional and local programs which deal with mental retardation and associated problems.

25. ROSENZWEIG, L. and J. Long. *Understanding and Teaching the Dependent Retarded Child.* Darien, Connecticut: Teacher's Publishing Company, 1968.

26. SAN FRANCISCO United School District. *Curriculum Material for the Severely Mentally Retarded.* Revised Edition. San Francisco, California: San Francisco United School District (Atypical Department, Child Welfare Division), 1960.

27. SECRETARY's COMMITTEE on Mental Retardation. *Mental Retardation Publications.* (Bibliography). Washington, D.C.: Secretary's Committee on Mental Retardation (U.S. Department of Health, Education and Welfare), 1971.

An annotated bibliography listing publications by H.E.W. which deal with mental retardation in addition to other accompanying handicaps. The sections covered are: general, legislation and

federal programs, specific handicapping conditions, institution and home care, detection, diagnosis and treatment, rehabilitation, education and employment, and family.

28. SUNLAND Training Center. *Outline of the Program for Trainable Residents.* Gainesville, Florida: The Center, May 15, 1964.

Philosophy, goals, and description of residents are presented. Activities outlined for beginners, intermediates, adult men, and adult women in the following 1) perception development, 2) communication and expression skills, 3) motor skills, 4) number concepts, 5) personal health and grooming skills, and 6) recreational and social activities. Separate section outlines program for blind trainable retarded in discrimination skills, learning skills, music activities, self expression, and social skills. Ground maintenance program for boys and general education program are also described.

29. TRILLINGHAM, C. C. *The Education in Special Training Classes of Children Who Are Severely Mentally Retarded, a Handbook for Teachers to Use With Parents.* Los Angeles, California: Los Angeles County Board of Education, January 1960.

30. VINELAND State School. *Vineland State School: Guide for Training of the Severely Retarded.* Vineland, New Jersey: the School, 1961

31. VIRGINIA State Department of Education. *Educational Planning for Severely Retarded Children.* Richmond: State Department of Education (Special Education Service), n.d.

32. _____. *Guide for Curriculum Development for Teachers of Trainable Mentally Retarded Children.* Richmond: State Department of Education, (Division of Special Education), January 1973.

Guide which is applicable to lower functioning levels of mentally retarded persons. Goals, characteristics, curriculum, role of teachers, activities based upon social, emotional, mental and physical development and evaluation.

33. WILLIAMS, Harold M. *Education of the Severely Retarded Child-Classroom Programs.* Washington, D.C.: Government Printing Office, 1961.

B. EDUCATIONAL/TRAINING PROGRAMS WHICH DESCRIBE PHYSICAL OR RECREATIONAL ACTIVITIES

1. ALPERN, G. D. and T. J. Boll. *Education and Care of Moderately and Severely Retarded Children, with a Curriculum and Activities Guide.* Seattle, Washington: Special Child Publications, Inc., (4535 Union Bay Place, N.E.) 1971.

   Teaching techniques, planning strategies, and important basic skills to be learned by mentally handicapped children. Curriculum and Activities Guide is arranged according to Curriculum Age Level Task, Aims and Purposes, and Description of Activity.

2. ANTILL, Francis, editor. *Day Care Center Curriculum Guide.* Baton Rouge, Louisiana: Louisiana State Department of Hospitals (Division of Mental Retardation), 1965.

   Content, materials, and teaching suggestions provided for: self-care skills; motor skills and coordination; communication; socialization; vocational training safety; health; and intellectual stimulation.

3. CONNOR, Frances P. and Mabel E. Talbot. *An Experimental Curriculum for Young Mentally Retarded Children.* New York, New York: Teachers College Press (Columbia University), n.d.

   A curriculum developed as part of a five-year study to determine the influence of group experience upon a sample of young educable mentally retarded children: curricular content, methodology, settings and activities, administration and evaluation. The lower levels of curricular behaviors and readiness are applicable to severely and profoundly retarded individuals.

4. CONTRUCCI, Victor J., editor. *Wisconsin We Do It This Way Series: A Resource Guide for Trainable Mentally Retarded.* Madison, Wisconsin: Wisconsin State Department of Public Instruction (Bureau for Handicapped Children), 1966.

   Units in health, safety, social experiences, communication of ideas, use of leisure, travel, money management, homemaking, art and art appreciation, adaptation to environment, material values, and citizenship. Areas include self-help, motor, social, academic, and vocational skills. Provides lesson plans, objectives, procedures and activities, directions for construction of and bibliographical references to materials, and evaluation methods. Guide to the persisting life functions also provided.

5. DAVIS, Patricia A. *Methods and Aids for Teaching the Mentally Retarded.* Minneapolis, Minnesota: T.S. Denison & Company, Inc., 1970.

   Curricular outline for mentally retarded children in special classes; objectives, techniques, skills, concepts and activities, including physical education and recreation.

6. EGG, Maria. *Educating the Child Who Is Different.* New York, New York: John Day Company, 1968.

   Part I: relationship of the teacher to the retarded child and his family; Part II: how to educate retarded children. Specific chapters deal with Play, Music and Rhythm, Drawing and Painting, The Manual Arts.

7. GILMORE, Alden S., Thomas A. Rich and Charles F. Williams. *Mental Retardation: A Programmed Manual for Volunteer Workers.* Tampa, Florida: MacDonald Training Center Foundation (Research Division), 1965.

   Orientation and background information for conducting programs for the retarded which will increase understanding the retarded. Sections on mental retardation, education of the retarded, behavior of the retarded, physical ability of the retarded, recreation for the retarded, family relations, brain damage, speech and hearing, health, and rehabilitation.

8. INDIANA State Department of Public Instruction. *Implementing Programs for Trainable Mentally Retarded Children.* Indianapolis, Indiana: The Department, 1967.

   Major task areas: family group, communication skills, physical development, socialization, recreational interests and skills, and preparation for work oriented activity. Six papers are presented: Precision Teaching and Behavior Modification at the Johnny Appleseed School; Establishment of Conference Purposes and Aims; The Elementary Secondary Education Act of 1965; The Quality of Programs for the Moderately Retarded; and Physical Education for the Retarded.

9. LINCOLN School. *A Flexible Guide for Teachers of Trainable Children.* Nutley, New Jersey: the School, 1965.

   Curriculum content and learning activities for three levels of ability: 1) aspects of social living--courtesy, responsibility to others, and group participation; 2) aspects of number development--counting and concept of measurement; 3) language arts--communication, listening, reading, and writing. Suggested activities for music and physical education are included.

10. LOWN, Irving C., Jr. *Pre-Professional Training in Mental Retardation Final Report.* Coolidge, Arizona: Arizona Children's Colony, September 26, 1968.

To interest students in mental retardation health services careers, 10 eligible prebaccalaureate students were selected to participate in a 10-week summer training program: the first two weeks involved orientation to mental retardation and health services related disciplines of recreational and physical therapy. For the remaining eight weeks, students, five in physical and five in recreational therapy, were assigned to two cottages consisting of 126 female profoundly retarded residents. Stimulation and training program with supervision by professional representatives was provided. Results indicated residents showed improvement in self-care abilities, motor behavior and more mature social responsiveness. Evaluation of the students, indicated involvement on the part of the students, a sense of professional identification, and acquisition of appropriate skills and attitudes.

11. MOLITOR, M. Graham. *A Curriculum for the Residential Trainable Child.* Seventh Edition. Union Grove, Wisconsin: Southern Wisconsin Colony and Training School, 1967.

Curriculum to meet needs of trainable mentally handicapped developed at Southern Wisconsin Colony and Training School for children 5-17 years of age is detailed, as is the curriculum for work orientation. Descriptions of specialized and supporting programs (music, speech and language, physical education, and field trips).

12. MOLLOY, Julia S. *Trainable Children.* New York, New York: John Day Company, 1972.

An aid for 1) planning a program for trainable children, 2) presenting basic learning techniques, and 3) evaluating effectiveness of the curriculum and progress of children ("trainable" retarded and the multiply handicapped). Section on physical growth includes gross motor and fine motor development, physical education and play.

13. OHIO Department of Mental Hygiene and Correction. *More Effective Teaching Through Understanding.* Columbus, Ohio: Ohio Department of Mental Hygiene and Correction (Division of Mental Hygiene, Bureau of Mental Retardation), n.d.

Programing for mentally retarded includes learning readiness, discipline, communication, self-care, physical development, eye-hand coordination, social competence, music, rhythmics, drama, arts and crafts and other related areas.

14. OKLAHOMA State Department of Education. *A Guide for Teachers of Trainable Mentally Retarded Children.* Oklahoma City: Oklahoma State Department of Education, 1968.

Philosophy, administration and policies, general aims and objectives, suggestions for evaluation of student and curriculum of the Oklahoma State Program for trainable children. Activities and suggestions: self-care, home-community usefulness, physical education, language development, number concepts, music therapy, and art therapy. Problems in parent counseling, sample programs and equipment are considered.

15. PERRY, Natalie. *Teaching the Mentally Retarded Child.* New York, New York: Columbia University Press, 1960.

Discusses problem of home, school, and community coordination in encouraging self-expression and self-care in severely mentally retarded or trainable children. Sample charts for evaluating pupils, names of manufacturers and distributors of toys and games, typical school schedules, and specific suggestions for making everything from a paper lantern to a coat rack. Chapters deal with physical development of the retarded, music activities, crafts, and physical activities.

16. ROGOUIN, Anne. *Learning By Doing: An Illustrated Handbook for Parents and Teachers of Children Who Learn Slowly.* Johnstown, Pennsylvania: Mafex Associates, Inc., 1971.

Education and training programing for mentally retarded children and youth: areas include health, physical education, music and art.

17. SCHEERENBERGER, R. C. *Training the Severely and Profoundly Mentally Retarded.* Springfield, Illinois: Illinois Department of Mental Health (Division of Mental Retardation Services), 1967.

Monograph papers presented at a 1967 training institute for day care personnel in Illinois: training goals and curriculum, diagnosis and evaluation, methodology, sensorimotor development, communication skills, arts and crafts, and music.

18. SCOTT, Mary D. *Creative Ways of Teaching the Mentally Handicapped.* Honolulu, Hawaii: Hawaii Department of Education (Office of Instructional Services, Special Service Branch), August 1966.

Overall educational program for trainable mentally retarded discussed which emphasizes physical training: active and passive activities are described in detail

19. SHELBY County Schools. *Special Education Curriculum Guidelines: Trainable Mentally Retarded.* Memphis, Tennessee: Shelby County Schools, 1968.

Includes general goals and basic understandings, activities, materials, and evaluation. Units: social adjustment; health (physical education, nutrition, and body care); community helpers; safety; language development; numbers; music; color; arts and crafts; work tasks leading to vocational rehabilitation; evaluation of program; and evaluation of child.

20. SOUTHEAST Region Special Education Service Center. *An Experimental Curriculum Guide for Teachers of the Trainable Mentally Retarded.* Downey, California: Southeast Region Special Education Service Center, 1968.

Experimental curriculum utilizes activities sequenced in order of difficulty. Units on self-understanding and self-care, communication, and social competence; also included are units on sensory and gross and fine motor skills. Further units include recreational skills for self-motivation and leisure activities.

21. SUN Dial School. *Curriculum for the Trainable Mentally Retarded.* Fort Lauderdale, Florida: Broward County Board of Public Instruction, 1966.

Characteristics of the trainable child, the importance of parent education, and an overview of curriculum objectives and educational needs are presented. Objectives, materials, and suggested teaching activities for primary and intermediate levels in areas of communication skills, listening and language development, social development, reading, arithmetic, science, music, art, physical education, home economics, and workshop and plant nursery experience.

C. PHYSICAL AND RECREATIONAL ACTIVITY PROGRAMS

1. ABERNETHY, Kathleen, Judy Cowley, Harold Gillard, and John Whiteside. *Jumping Up and Down: A Manual of Motor Activities to Develop Balance and Coordination.* San Rafael, California: Academic Therapy Publications, (1539 4th St.), 1970. $2.00.

Activities for boys and girls five to thirteen years of age. Individual, partner, and group activities with and without equipment: warm-up, balance, springing and landing, strengthening, cardiorespiratory, flexibility, and floor routines.

2. ALKEMA, Chester J. *Art for the Exceptional.* Boulder, Colorado: Pruett Publishing Company, 1971.

Activities, methodology and rationale are presented for art experiences for the physically handicapped, emotionally disturbed, juvenile delinquent, deaf, gifted, mentally retarded and blind.

3. AMERICAN Association for Health, Physical Education and Recreation. *Annotated Bibliography on Perceptual-Motor Development.* Washington, D.C.: the Association, 1972. $3.25.

An up-to-date bibliography with sections devoted to auditory perception and movement; body image and movement; and depth-distance perception and movement. A separate compilation of tests, programs, material sources, assessment instruments and films is included.

4. _____. "Approaches to Perceptual-Motor Experiences." Reprints from Journal of Health, Physical Education, and Recreation. Washington, D.C.: the Association, 1970. 50¢.

An overview of programs relating perceptual-motor experiences to movement education, motor abilities, reading readiness, and the problem child.

5. _____. *Best of Challenge.* Washington, D.C.: the Association, 1971. $2.50.

A compilation of the best articles from *Challenge*, AAHPER's newsletter for special educators, physical educators, recreation and related personnel. Designed as a basic or supplementary text for college courses, and as a reference for workshops, clinics, seminars, institutes, classes, and similar in-service and pre-service programs.

6. _____. *Foundations and Practices in Perceptual-Motor Learning: A Quest for Understanding.* Washington, D.C.: the Association, 1971. $3.95.

A multidisciplinary examination of major conceptual viewpoints of perceptual-motor behavior and teaching methods, from the October 1970 Cincinnati Conference. Includes descriptions of action programs, tests, resource materials, and a professional preparation survey.

7. _____. *Guide for Programs in Physical Education and Recreation for the Mentally Retarded.* Washington, D.C.: the Association, 1968. $1.00.

Suggested activity areas such as physical fitness, motor ability, sports skills, special events, recreation; evaluation, including an annotated listing of perceptual-motor, physical fitness, and motor

ability tests appropriate for the mentally retarded; motivation--award systems; facilities, equipment, and supplies; medical examinations; in-service education and training; volunteers; parents and the program; public relations and information.

8. _____. "Motor Activity and Perceptual Development - Some Implications for Physical Educators." Reprints from Journal of Health, Physical Education, and Recreation. Washington, D.C.: the Association, 1968. 25¢.

The relationships between motor activity and perceptual development including an annotated bibliography on selected readings.

9. _____. *Perceptual-Motor Foundations: A Multidisciplinary Concern.* Washington, D.C.: the Association, 1969. $3.00.

Describes action programs for developing sensory and motor skills, personalizing early education, and providing developmental activities.

10. _____. *Physical Activities for the Mentally Retarded: Ideas for Instruction.* Washington, D.C.: the Association, 1968. $2.00.

Activities promoting fundamental motor development and the exploration of three general areas of skill: 1) net, racket, and paddle activities; 2) rolling, pushing, throwing, and catching activities; and 3) striking and kicking activities.

For physical education instructors of the mentally retarded, classroom teachers, parents, recreation personnel, and volunteers.

11. _____. *A Practical Guide for Teaching the Mentally Retarded to Swim.* Washington, D.C.: the Association, 1969. $2.00.

Guide is a composite of ideas and experience of many who have taught the mentally retarded to swim. Contents of the Guide are a point of departure for each instructor who will have to find the most appropriate methods, techniques, and progressions. Designed for professionals and volunteers, for individuals with little or no background with the mentally retarded, for those with minimal swimming experience, and for personnel with little background in either area.

12. _____. *Programing for the Mentally Retarded in Physical Education and Recreation.* Washington, D.C.: the Association, 1968. $3.00.

Report of a national conference on programing in physical education and recreation for the mentally retarded. Topics covered

include recreation and day care for the mentally retarded; a community recreation team approach to programing; the role of motor activities in programs for the retarded; recreation programing for the adult retardate; and programs for the severely and profoundly retarded.

13. _____. *Recreation and Physical Activity for the Mentally Retarded.* Washington, D.C.: the Association, 1966. $2.00.

Covers the objectives of recreation, brief description of mental retardation, what play can mean for the retarded, objectives and desired outcomes of programs in physical activity, organization and teaching, and suggested specific activities. Annotated bibliography of source materials.

14. ATNEY, John W. *Sing and Learn.* New York, New York: John Day Company, 1965. $3.89.

This book of simple songs related to everyday life includes teaching instructions designed to make them more meaningful to retarded children.

15. AVEDON, Elliott M. *Recreation and Mental Retardation.* Washington, D.C.: Government Printing Office (Superintendent of Documents), 1966. 15¢.

Subject of recreation for the mentally retarded is discussed: examples of activities for the retarded at home, in school, in community and agency programs are given. Resource information provided.

16. AVEDON, Elliott M. and Frances B. Arje. *Socio-Recreative Programming for the Retarded: A Handbook for Sponsoring Groups.* New York, New York: Bureau of Publications (Teacher's College, Columbia University), 1964. $1.50.

Rationale and procedure for organizations and groups to develop recreation programs for the retarded. Sections list source materials, bibliographical materials, and sample forms.

17. BERRYMAN, Doris L. (Project Director). *Enhancement of Recreation Service to Disabled Children, Part I.* Report of a three-year study supported in part from the Children's Bureau, U.S. Department of Health, Education, and Welfare. New York, New York: New York University (School of Education). 1971.

Final report of a study to: 1) obtain an estimate of the type and quality of recreation services provided to physically disabled and mentally retarded children and youth in a representative national sample of a wide variety of agencies, organizations and institutions in the public, voluntary, and private sectors; 2) develop recommended standards

and criteria for provision of recreation services to handicapped children and youth; 3) identify problems and obstacles encountered by recreation resources which do provide services to physically disabled and mentally retarded children and youth and discover the reasons why some resources provide these services to non-disabled children and youth only; and 4) write, and prepare for distribution, pamphlets which will assist communities and their agencies, organizations, and institutions in the initiation, improvement and/or expansion of recreation services to physically disabled and mentally retarded children and youth.

18. _____. *Planning Project for the Development of Recreation Services in Rehabilitation Centers.* Final Report supported in part from the Vocational Rehabilitation Administration, U.S. Department of Health, Education, and Welfare. New York, New York: New York University (School of Education), n.d.

Analysis of responses from the Planning Project indicates that though there hasn't been any appreciable change since 1959 in the proportion of agencies providing recreation services, there has been an increase in the proportion of agencies using full-time personnel to plan and conduct recreation services. Results also show that there is considerable divergence among rehabilitation agencies concerning almost every aspect of providing recreation services; administrative structure of services; and educational level and background of staff conducting services.

19. _____. *Recommended Standards with Evaluative Criteria for Recreation Services in Residential Institutions.* Report of a three-year study supported in part from the Children's Bureau, U.S. Department of Health, Education and Welfare. New York, New York: New York University (School of Education), 1971.

The suggested standards and evaluative criteria incorporated in this pamphlet are designed to assist a hospital or other institution in evaluating the recreation services it provides to residents. They were designed primarily to evaluate recreation services provided to children and youth, however, they are equally applicable to services provided to persons of all ages in a variety of residential treatment settings.

20. _____. *Recreation for Disabled Children: Guidelines for Parents and Friends.* Report of a three-year study supported in part from the Children's Bureau, U.S. Department of Health, Education and Welfare. New York, New York: New York University (School of Education), 1971.

Guidelines for parents and others concerning how to find recreation services, how to start a recreation program, and examples of successful programs.

21. Berryman, Doris L., Annette Logan and Bernard Broginsky. *Serving Disabled Children: Guidelines for Recreation Agencies.* Report of a three-year study supported in part from the Children's Bureau, U.S. Department of Health, Education and Welfare. New York, New York: New York University (School of Education), 1971.

    Final report of Health, Education and Welfare grant giving guidelines for including all levels of disabled children in community recreation programs.

22. BETER, Thais R. and Wesley E. Cragin. *The Mentally Retarded Child and His Motor Behavior: Practical Diagnosis and Movement Experiences.* Springfield, Illinois: Charles C. Thomas, Publisher, 1972.

    Educational experiences to enhance learning potential and total personality functioning of mentally retarded children. To assist anyone working with exceptional children in an educational, institutional, or recreational setting. Philosophical material, diagnostic and program planning are applicable to children with all types of learning difficulties. Intended for use with all levels of retarded.

23. BRAATEN, June. *Planning Recreational Activities for the Retarded Child at Home.* Toronto, Ontario, Canada: Canadian Association for the Mentally Retarded (149 Alcorn Avenue), 1969. 25¢.

    Suggestions for planning recreational activities are addressed to parents and apply particularly to the trainable mentally retarded child who is not enrolled in a school program but remains at home. Activities will not only keep the child occupied and happy but can play a part in his development and learning. Plan for facilities at home is presented, indicating equipment and materials. Away-from-home activities which can be arranged by the parent are included. Some activities are applicable to continuum care situations for profoundly and severely retarded.

24. BRAATEN, June and Isabel Lee. *Swimming Program for the Trainable Retarded. Guides 1-3.* Toronto, Ontario, Canada: Canadian Association for the Mentally Retarded (149 Alcorn Avenue), 1969.

    Three manuals about planning swimming program. Guide One: organization and administration, including committee personnel, facilities and equipment, staff and their qualifications, transportation, public relations, and finance. Guide Two: information on conducting the program in terms of staff duties and orientation, instructional program and teaching suggestions, and recording progress. Guide Three: testing and recognition, required materials, securing examiners, and sample test sheets and explanations.

25. BROWN, Richard L. *Swimming for the Mentally Retarded.* Arlington, Texas: National Association for Retarded Citizens (2709 Avenue E East), 1958. 25¢.

Guidelines for establishing a swim program for all levels of mentally retarded persons: organization, values, objectives, skills, teaching suggestions and program forms.

26. CANNER, Norma. *". . . and a time to dance."* Boston: Beacon Press, 1968.

One hundred and twenty-five photographs recording author's work with children and teachers in the development of simple, spontaneous, creative movement, designed to unlock the personalities and evoke the capabilities of retarded children.

27. CARDINAL Stritch College. *Physical Education Curriculum for the Mentally Retarded.* Milwaukee, Wisconsin: Cardinal Stritch College, 1962. $3.00.

Sequential development for children with mental handicaps. Goals, rhythmic response, group games, and physical fitness exercises are specified for several different levels, ranging from MA 3 to MA 12.

28. CARLSON, Bernice Wells. *Act It Out.* Nashville, Tennessee: Abingdon Press, 1956. $2.50.

Divided into two sections, the first on your own acting and the second on puppet performances. This book will help make acting fun for participants and audience alike.

29. CARLSON, Bernice Wells and David R. Ginglend. *Play Activities for the Retarded Child.* Nashville, Tennessee: Abingdon Press, 1961. $4.00

Play and recreational activities for the retarded: games; crafts; musical, informal, and imaginative play. Activities classified on basis of developmental areas--mental health, social, physical, language, and intellectual.

30. CARLSON, Bernice Wells and David R. Ginglend. *Recreation for Retarded Teenagers and Young Adults.* Nashville, Tennessee: Abingdon Press, 1968. $4.95

Book summarizes basic social and physical needs of teenage and young adult retardates. Methods and techniques for meeting needs through music, games, parties, sports, hobbies, and other

recreational activities. Activities listed for special recreational programs, community projects, and recreation at home.

31. CHALMERS, Thomas. "Value of Play in Nursing Severely Subnormal Children." Nursing Mirror 122: 25: 12; 16; 1966.

Involvement of a severely mentally retarded, mongoloid child in play activity over a period of 20 months.

32. CLARK, William, Jr., Annie Bennett. "Initiating a Recreation Program in Cottages for the Severely and Profoundly Retarded." Therapeutic Recreational Journal 3: 3: 20-24; 1969.

Recreation activities, materials, facilities and guidelines for setting up the program are discussed.

33. CLELAND, Charles, Jan Swartz, William Chasey. "The Role of Play, Games, and Toys in Recreation Programming for the Moderately and Profoundly Retarded." Therapeutic Recreation Journal 5: 4: 152-155, 188; 1971.

Article details teaching approaches for recreation program.

34. CORRADO, Joseph and James Reed. *Play With a Difference*. New York, New York: The Play Schools Association Inc. (120 West 57th Street), n.d.

Training program at Letchworth Village, a New York State school for the retarded to determine the extent to which the potential of profoundly handicapped children and adult residents might be developed through supervised play.

35. CORTAZZO, Arnold. *Activity Centers for Retarded Adults*. A publication of the President's Committee on Mental Retardation. Washington, D.C.: Superintendent of Documents, U.S. Government Printing Office, June 1972. Publication No. (05) 73-43. 70¢.

Information on administration and organization of activity centers (facilities where mentally retarded adults participate in organized, personally meaningful, programmed activities for optional adjustment to family and community).

36. CRATTY, Bryant J. *Developmental Sequences of Perceptual-Motor Tasks, Movement Activities for Neurologically Handicapped and Retarded Children and Youth*. Freeport, New York: Educational Activities, Inc. (P.O. Box 392), 1967. $2.95.

Intended for special education and physical education teachers, the handbook presents selected developmental sequences of activities

based on analysis of perceptual motor characteristics of groups of retarded and neurologically handicapped children: trainable retarded, educable retarded, mongoloids, and neurologically handicapped. Teaching guidelines are outlined for evaluation and graded development: body image, balance, locomotion, agility, strength and endurance plus flexibility, catching and throwing balls, manual abilities, and moving and thinking.

37. _____. *Learning and Playing.* Freeport, New York: Educational Activities, Inc. (P.O. Box 392), n.d.

This card file of fifty vigorous activities for the atypical child is an invaluable source of help to the person working with the retarded. Each game card contains the methods and modification of the activity as well as suggestion of who may participate with reasonable success.

38. _____. *Motor Activity and the Education of Retardates.* Philadelphia: Lea & Febiger, 1969. $8.75.

Motor activity combined with other components of the education of the retarded, including speech, vocational training, and social skills. Motor activity may improve retardate's total education by arousing and/or calming him; improving self-control and attention; increasing hand-eye coordination, motivation, self-concept, aspiration level, and choice-making ability; and providing rhythmic skills and activities to enhance mathematics, spelling, speech, and writing.

39. DROWATZKY, John N. *Physical Education for the Mentally Retarded.* Philadelphia: Lea & Febiger, 1971.

Theoretical framework for selecting activities integrated with presentation of methods. Theoretical orientation: nature and causes of mental retardation, fitness and motor characteristics of the retarded, the learning process, and planning physical education programs for retarded children. Activities and techniques: physical fitness, basic movement skills, and perceptual-motor skills. Low organized games, lead-up activities, and sports and recreational skills. Chapters deal with teaching aids, special equipment and resources.

40. FAIT, Hollis F., editor. *Curriculum Guide for Teaching Physical Education to the Profoundly and Severely Retarded.* Mansfield Depot, Connecticut: Mansfield Training School (Department of Physical Education), 1969.

Describes methods and techniques, objectives, and core activities. Also considered supplementary activities for the hyperactive

and emotionally disturbed; suggestions for the teacher; and evaluation, including records, motor skills tests, and behavior rating scales.

41. FREEMAN, B. L. and Jean Mundy. *Habilitative Recreation for the Mentally Retarded.* Birmingham, Alabama: Center for Developmental and Learning Disorders (University of Alabama in Birmingham, 1720 Seventh Avenue, South), 1971.

Philosophy of habilitative recreation and prerequisite skills for developing programs. Habilitative recreation: 1) based on evaluation; 2) goal oriented; and 3) sequential in nature.

42. GEDDES, Dolores. *Physical Activities for Individuals With Handicapping Conditions.* St. Louis, Missouri: C.V. Mosby Company (3301 Washington Boulevard), 1970. $4.95

This book is designed to provide practical information for modifying physical activities for individuals with handicapping conditions such as: Subaverage intellectual functioning at mild-to-moderate and severe/profound degrees, learning problems, visual problems, hearing problems, orthopedic problems, and emotional problems.

Program activities are suggested based upon individual social-emotional, mental and physical functional levels of each participant which is a noncategorical approach to physical education and recreation for individuals with various handicapping conditions.

Information given on examples of behaviors which might be developed in program participants who have handicapping conditions, developmental sequences of activities, general and specific activity modification suggestions, behaviors to be developed in adapted physical education/recreation or in-service training programs, references for evaluative criteria, equipment and supplies, national resource information, audio-visual aids and operational definitions.

43. GINGLEND, David R. *The Expressive Arts for the Mentally Retarded.* Arlington, Texas: National Association for Retarded Children, 1967. $2.00.

Purpose: to stimulate thinking about the role of expressive arts in educating and training the mentally retarded, and in broadening their interests and activities during leisure time. Areas include (art, arts and crafts, communication and language, dance, dramatics, and music).

44. GINGLEND, David R. and Winifred Stiles. *Music Activities for Retarded Children: A Handbook for Teachers and Parents.* Nashville, Tennessee: Abingdon Press, 1965.

Importance of music in the learning of mentally retarded. Song material and simple folk dances, along with practical hints. Instructions for using the record player, autoharp, and percussion instruments. Sources given for printed materials and instruments.

45. GROVE, Frances A. "Answers to Some Questions About Camping For Retarded." ICRH Newsletter 3: 2: 1-3; 1967. (Out of Print).

Moderately and severely retarded children and adults, even wheelchair mentally retarded persons went to day camp with normal children and were included in the activities with little difficulty. Patients showed adaptability and performance beyond what would generally be expected.

46. GROVE, Frances A. and Charles V. Keeran. "Teaching the Severely Retarded to Use Playground Equipment." *Best of Challenge.* Washington, D.C.: American Association for Health, Physical Education and Recreation, 162-164; 1971.

Few profoundly or severely retarded residents of institutions know how to use playground equipment. Pacific State Hospital began a program aimed at encouraging the residents to use playground equipment and teaching them to play effectively. Merry-go-rounds, swings, climbers, tunnels, and slides were used to provide the patients with a variety of activities and to foster development of a range of skills.

47. HACKETT, Layne C. *Movement Exploration and Games for the Mentally Retarded.* Palo Alto, California: Peek Publications (4067 Transport Street), 1970.

Information for physical educators, special educators, classroom teachers, recreation specialists, volunteers, and parents. Activities, methods, approaches, procedures, patterns, and concepts--in movement exploration for the mentally retarded.

Chapters deal with body image, space awareness, self-confidence, visual focusing, balance, and hand-eye coordination.

48. HILLMAN, William A., Jr. "Recreation for the Severely and Profoundly Retarded." Programing for the Mentally Retarded. Report of a National Conference, October 31 - November 2, 1966. Washington, D.C.: AAHPER, 95-97; 1968.

Recreation programs for the profoundly and severely mentally retarded in institutions need to be staffed by full-time recreation personnel, to provide reduction in the resident-staff ratio, to explore and experiment with different kinds of recreation activities, and to be evaluated to determine whether or not they are well-balanced and meet the psychological and social needs of the residents.

49. HILLMAN, William A. "Therapeutic Recreation with the Profoundly Retarded." Recreation for the Ill and Handicapped 10: 2: 3; 1966.

Outline of therapeutic recreation program for severely and profoundly retarded children at the State Colony, Woodbine, New Jersey. Involved were 300 male residents having a median MA of 1 to 3 years and a median IQ of 12. Therapy was based on small group activity and designed with aims of 1) reducing illness and confinement to bed, 2) lessening aggressive behavior, 3) improving the sleeping habits, and 4) developing more easily controlled behavior.

50. HOLLANDER, H. Cornelia. *Creative Opportunities for the Retarded Child at Home and in School.* Garden City, New York: Doubleday & Company, 1971. $10.00.

Six booklets--*Getting Started, Finger Painting and Print Making, Drawing and Painting, Clay and Other Dimensional Media, Stitchery,* and *Woodworking and Odds and Ends*--were written for parents, teachers and volunteers, for nurses, and for vocational workers. Specific areas include: finger painting, pulling a print, butterfly prints, gadget printing, vegetable prints, stencil rubbings, printing for a prepared surface, silk screen printing, linoleum block prints, scribbling, crayon processes, felt-tip markers, colored chalk drawings, melted crayon drawings, ink drawings, painting, cut-tear-paste pictures, puppets, paper mache, collage, mosaic, wire sculpture, seed pictures, tongue depressor projects, and holiday decorations.

51. INFORMATION and Research Utilization Center in Physical Education and Recreation for the Handicapped. *A Catalog of Federal Assistance Relating to Recreation and Physical Education for the Handicapped.* Washington, D.C.: American Association for Health, Physical Education and Recreation, July 1973.

Description of 39 programs providing federal financial support (as of June 1973) for research, training, and technical assistance in physical education and/or recreation for impaired, disabled, and handicapped persons. Provides information on each program regarding specific types of assistance provided, purposes for which assistance is available, who can apply, how to apply, and federal offices to contact.

52. _____. *Guide for Financial Assistance and Program Support for Activities in Physical Education and Recreation for Impaired, Disabled, and Handicapped Participants: Innovation and Success Stories.* Washington, D.C.: American Association for Health, Physical Education and Recreation, May 1973.

In addition to federal or state support funds, local communities have other resources for obtaining complete or supplementary financial assistance for facilities, equipment, supplies, manpower, and programs in physical education, recreation, camping, outdoor education, sports, and athletics for individuals with handicapping conditions. Community resources are available to give such financial aid; however, the person responsible for obtaining these monies must discover these resources and decide which approach to use in soliciting funds. This publication is designed to help in fund-raising by describing effective methods and types of groups which have provided support.

53. _____. *Guide for Homemade Innovative Play Equipment for Activities in Physical Education and Recreation for Impaired, Disabled, and Handicapped Participants.* Washington, D.C.: American Association for Health, Physical Education and Recreation, May 1973.

Homemade and inexpensive equipment, supplies, and adapted devices are described for use in physical education, recreation, camping, playground, and related programs for individuals with handicapping conditions. Apparatus is described for use with program participants who were in large groups, had different interests, exhibited diverse abilities or who were in programs with limited budgets. Sections on detailed progression of balance activities (for performance on equipment), resistance activities and equipment which may be made.

54. _____. *Periodicals Dealing With Physical Education and Recreation for Handicapped Persons.* Washington, D.C.: American Association for Health, Physical Education and Recreation, August 1973.

A list of periodicals and newsletters which contain information on physical education and recreation for individuals with handicapping conditions. The chart presents 89 names of publications followed by types of handicapping condition dealt with and names of data retrieval systems which index the publication.

55. KIMBRELL, Don L., et al. "Institutional Environment Developed for Training Severely and Profoundly Retarded." Mental Retardation 5: 1: 34-37; February 1967.

Special problems of training and caring for 20 institutionalized severely mentally retarded females (ages 6 to 18) with agressive and

destructive behavior are discussed. Special toys, developmental equipment, and training equipment to aid in establishing self-feeding and toilet habits and to develop coordination are described: heavy-duty metal frame swings with wooden seats and an adjustable bar, large metal sandboxes, a simplified jungle gym, mental swimming pool, strengthened tricycles and bicycles, rocking swans; tumble tubs, staircases with deep and shallow steps, chalk and blackboards, buttoning and shoe stringing apparatus; special utensils, recessed trays, and special toilet seats. Destructible materials, environmental changes including a thermostatically controlled climate, ropes for walking groups, and articles providing tactile, visual, auditory, and kinesthetic stimulation are also considered.

56. KLAPPHOLZ, Lowell, editor. *Physical Education for the Physically Handicapped and Mentally Retarded.* New London, Connecticut: the Author (Box 8). n.d.

Series of articles compiled concerning physical education for the physically handicapped and mentally retarded; different approaches utilized by various personnel and schools in the nation are discussed.

57. KUIPER, H. "Sensation and Activity." Journal of Mental Subnormality 13: 25: 64-66; 1967.

Play activities can be used to stimulate development in SMR children. Unlike the play of normal children, the play of the SMR child is very simple, repetitious, and stereotyped.

58. LETT, Mark and Billy Turnbow. *Travis State School Recreation Handbook.* Austin, Texas: Travis State School (Texas Department of Mental Health and Mental Retardation), 1973.

Guide for physical education and recreation therapists: objectives, safety precautions, equipment needed and activities. Part/whole method for presenting and evaluating skills.

59. LINDSAY, Zaidge. *Art is for All.* New York, New York: Taplinger Publishing Company (29 East Tenth Street), 1967. $5.50.

This book, subtitled "Arts and Crafts for Less Able Children", concerns especially the requirements of the educationally retarded and presents a wealth of original and exciting arts and crafts projects.

60. LINFORD, Anthony G. and Claudine Y. Jeanrenaud. *Systematic Instruction for Retarded Children: The Illinois Program--Experimental Edition. Part IV: Motor Performance and Recreation Instruction.* Urbana, Illinois: Illinois University (Institute for Research on Exceptional Children), 1970.

Guidelines on basic recreation movements, rhythm in music, handicrafts, and miscellaneous activities. Guidelines employ principles

of behavior change and direct instruction. Programed instruction lists terminal behaviors required from the child when the final task request is mastered. The justification of each skill selected, prerequisite skills, necessary instructional materials and advanced skills are explained. Evaluation criteria for the model lesson plans are provided. Lesson plans presented for 18 basic movements that involve one or a combination of the following gross motor movements: balance, object projection, object reception, body projection, and body reception. The rhythm section consists of plans on four attributes thought to be necessary for musical rhythm readiness: stop and go, loud and soft, fast and slow, and combining dimensions of loudness and fastness. The arts and crafts section includes model lesson plans on modeling with clay, drawing, pasting with glue, painting, and cutting with scissors.

61. _____. "A Systematic Language Structure for Teaching Recreative Skills to the Mentally Retarded." Therapeutic Recreation Journal 3: 1: 8-11; First Quarter, 1969.

The limited vocabulary of many retarded children is considered from the standpoint of the recreation therapist. The importance of using language which the child can understand is discussed with an example of how to teach specific skills through a structured sequence.

62. LITCHFIELD, Robert. "Ralph Finds a Home." Mental Retardation (Canadian Association for Retarded Children), 17: 2: 11-13; 1967.

Tranquille School (Tranquille, British Columbia) enacted three ward-inspired projects -- planting a garden with the help of 83 severely retarded males, building a park near the school, and raising a steer for a spring barbecue. These staff directed activities proved to be beneficial for both the students and the staff.

63. LOEWENDAHL. Evelyn. *Exercises for the Mentally Retarded: How To Develop Physical Functions in the Growing Child.* Swarthmore, Pennsylvania: Croft Inc. (100 Park Avenue), 1967.

Principles in interpreting physical levels of motor growth and development in the mentally retarded child are described. Developmental levels show skeletal and nerve muscle growth desirable for each year of growth from three to sixteen years, and describes exercises and physical activities recommended.

64. McNEICE, Willian C. and Kenneth R. Benson. *Crafts for the Retarded: Through Their Hands They Shall Learn.* Bloomington, Illinois: McKnight and McKnight Publishing Co., 1964.

Practical, sequential, and creative arts and crafts projects for the retarded. Projects are coded to indicate the use of small or large muscles, the degree of difficulty, and the required time for completion.

65. MITCHELL, Anna C., and Vincent Smeriglio. "Growth in Social Competence in Institutionalized Mentally Retarded Children." American Journal of Mental Deficiency 74: 666-673; 1970.

Two groups of 25 moderately and severely retarded children were evaluated for social competence development during their first years of institutionalization. Results suggest that young moderately and severely retarded children require formal teaching in addition to routine attendant care. Activity therapy was the added variant.

66. NATIONAL Therapeutic Recreation Society. *Therapeutic Recreation Service and Mental Retardation.* Therapeutic Recreation Journal 3: 3: Third Quarter, 1969. Washington, D.C.: The Society.

Special issue consolidates recent materials and presents articles which deal with service at international, federal, state, institutional, and local levels. Professional preparation, sources of materials, research, activity areas, listings of films, books, journals, and other reference materials are also included.

67. NESS, Richard A., et al. *Toward Better Movement: A Manual of Movement Activities for the Lower Level Mental Retardate.* Denton, Texas: Denton State School for the Mentally Retarded, 1972.

Background methods and media for comprehensive physical activity program for lower level mentally retarded persons. Activities, suggestions, and hints: developing and using learning packages, locomotor/non-locomotor/manipulative basic movements, low organized activities, trampoline activities, and tumbling and stunts. Charts outline sequences and progressions.

68. PENNINGTON, Ward R. and Emily J. Brazeal. "Partlow in Alabama Emphasizing Fitness." ICRH Newsletter 2: 8: 1; 4; 1967. (Out of Print).

Physical education program involving 1,500 mentally retarded persons in second year at Partlow State School (Alabama). Social awareness and etiquette have improved, sex problems have decreased, and emotional and academic improvements have resulted. Severely mentally retarded and

trainable mentally retarded attend half-hour classes, while educable mentally retarded have one-hour sessions.

69. PENNSYLVANIA Department of Education. *Challenge to Change: Program Guidelines in Physical Education for the Mentally Retarded.* Harrisburg, Pennsylvania: the Department (Box 911), September 1970.

Overview of mentally retarded children and effects that planned physical education and recreation programs may have upon them. Motor development, physical evaluation, progressive physical education, and methodology are dealt with.

70. POMEROY, Janet M. "Recreation and Day Care for the Severely Retarded in a Community Setting." Programing for the Mentally Retarded. Report of a National Conference, October 31 - November 2, 1966. Washington, D.C.: American Association for Health, Physical Education, and Recreation, 32-37; 1968.

Majority of 415 enrolled individuals aged 2 to 70 years who are engaged in 22 different programs conducted by the Recreation Center for the Handicapped, Inc. in San Francisco, California are retarded; the degree of retardation ranging from mild to profound. Day care program provides opportunities for SMR individuals to participate in the fun and enjoyment that comes from playing with other children.

71. RATHBONE, Josephine L. and Carol Lucas. *Recreation in Total Rehabilitation.* Springfield, Illinois: Charles C. Thomas, Publisher, 1959.

72. ROBBINS, Ferris. *Educational Rhythmics for Mentally and Physically Retarded.* New York, New York: Association Press (291 Broadway), n.d. $7.95.

Presents foundational rhythmic and movement skills which are correlated to the education program of participants. Excellent detailed progression of activities which are well illustrated and easily understood.

73. ROBBINS, Ferris and Jennet Robbins. *Educational Rhythmics for Mentally Handicapped Children.* New York, New York: Horizon Press, 1965.

Fundamental rhythms with the retarded. Program utilizes music, words, pictures, and movements to achieve total child development. Exercises are given for the severely retarded, intermediate, and more advanced.

74. _____. *Supplement to Educational Rhythmics for Mentally and Physically Handicapped Children.* Zurich, Switzerland: Ra-Verlag, Rapperswil, 1966.

This supplement is a continuation of original book *Educational Rhythmics for Mentally Handicapped Children.* Motor action and coordinated movement, accompanied by music, the spoken word, vision, touch, and the natural sense of imitation, are discussed.

75. SISTEK, Harriet R. "An Experiment in Recreation with Profoundly Retarded." *Best of Challenge.* Washington, D.C.: American Association for Health, Physical Education, and Recreation, 147-148; 1971.

A special program was developed by the Newark State School staff (New York) for twelve boys who lacked adequate self-care skills and who were unresponsive to their environment. Recreational activities on an individual and group basis were offered for fifteen months on an experimental basis. No formal evaluative criteria were used but the staff observed positive changes in the boys' responses to their environment.

76. SOUTHERN Regional Education Board. *Recreation for the Mentally Retarded: A Handbook for Ward Personnel.* Atlanta, Georgia: the Board (130 Sixth Street, N.W.), 1964.

Sections deal with philosophy and theory of recreation for the mentally retarded, role of the attendant in providing recreation, and activities for the retarded. Descriptions of active games, music and rhythms, quiet and table games, arts and crafts, and homemade games and equipment.

77. STEVENS, Ardis, Donald F. Bridgeman, et al. *Fun Is Therapeutic.* Springfield, Illinois: Charles C. Thomas, Publisher, 1972.

Recreation activities in nursing homes, hospitals, institutions, extended care facilities for mentally retarded, mentally ill, aged, physically handicapped persons.

78. TEXAS Department of Mental Health and Mental Retardation. *Operation Sports Health and Recreation Program.* (Report of "A Demonstration Project to Foster Physical Education-Recreation Programs for the Mentally Retarded. SRS Grant No. 56-P-70782-6.) Austin, Texas: the Department, 1971.

Curriculum described which is used at Beaumont and Amarillo State Centers for Human Development: methods, basic movement and physical activities for the retarded.

79. _____. *Recreation and Physical Education Guide.* Austin, Texas: Texas Department of Mental Health and Mental Retardation, February 1973.

Guide for physical education and recreation for the mentally retarded in Texas' State Schools. Sections include general information, methodology, and ideas for presenting activities and physical activities.

80. VINELAND State School. *A Suggested Guide for Recreation for the Severely Retarded.* Vineland, New Jersey: Vineland State School, 1961.

81. VOSS, Donald G. *Physical Education Curriculum for the Mentally Retarded.* Madison, Wisconsin: Wisconsin Department of Public Instruction (126 Langdon Street), September 1971. $1.50.

Curriculum guide developed under the leadership of Manitowoc County (Wisconsin) Handicapped Children's Education Board Special Education staff and consultants. Part I: discussion of physical education, philosophy and purposes, characteristics of a sound program, and recent trends. Mental retardation and characteristics of the retarded child reviewed. Part II: fundamental movement patterns and motor skills in terms of behavioral objectives, common deviations to watch for, and suggested developmental activities to use in developing patterns or skills at each level. Part III: practical games, sports, and recreational activities.

82. WEISER, Ron (editor). *Swimming Manual-Pacific State Hospital.* Pomona, California: Pacific State Hospital, Central Services Department, (Box 100), n.d.

Aquatic therapy manual designed for hospital employees and volunteers as a guide to teaching retarded patients to swim.

83. WOOD, Tom. "Lapeer Recreation Program Geared to Severely Retarded." ICRH Newsletter 3: 20: 1-4; 1969. (Out of Print).

Recreation and socialization, field trips, and fun for SMR are stressed at Lapeer State Home and Training School (Michigan). The recreation program provides year-round activity for 3,347 patients.

84. WUNDERLICH, Ray C. *Kids, Brains, and Learning.* St. Petersburg, Florida: Johnny Reads, Inc. (Box 12834), 1970.

The author, a pediatrician, applies his medical know-how, skills, and insights to the learning of children and to their learning pro-

blems. Topics include educating the retarded, increasing potential, toys and activities, systems of treatment, sensory-motor-perceptual training and patterning therapy.

D. EQUIPMENT

1. AITKEN, Margaret H. *Play Environment for Children: Play Space, Improvised Equipment, and Facilities.* Bellingham, Washington: Educational Designs and Consultants (3259 North Shore Road), 1972.

   This manual discusses the child and play, indoor and outdoor play areas, equipment and supplies for elementary physical education, how to make equipment and sources for equipment, supplies and teaching aids.

2. BITTNER, Linda, et. al. *Innovative Playground Equipment for Elementary Schools.* Ocala, Florida: The Physical Education Competence Curriculum Center, 1971.

   Includes photographs of 17 pieces of equipment, a statement of purpose or function, suggested activities, and a detailed drawing and specifications.

3. CHRISTIAN, Quentin A. *The Beanbag Curriculum: A Homemade Approach to Physical Activity for Children.* Wolfe City, Texas: The University Press, 1973.

   Includes hundreds of activity ideas centered around the use of homemade equipment such as broomsticks, hoops, beanbags, streamers, flash cards, rug squares, ropes, tires and 15 other items. Each section includes construction methods, activities, photographs, and illustrations.

4. CORBIN, Charles B. *Inexpensive Equipment for Games, Play and Physical Activity.* Dubuque, Iowa: Wm. C. Brown Company Publishers, 1973.

   Provides illustrations and construction, needed materials, useful activities and teaching suggestions of inexpensive equipment for physical education and recreation.

5. EDUCATIONAL Facilities Laboratories. *Found Spaces and Equipment for Children's Centers.* New York, New York: Educational Facilities Laboratories (477 Madison Avenue), 1972. $2.00.

   Compilation of resourceful, creative ways which can be used to transform inexpensive and overlooked spaces into places and things for learn-

ing. Pictures illustrate uses of ideas in a variety of indoor and outdoor spaces. A few detailed drawings of area layouts show space relationships.

6. FREDERICK, A. Bruce. *212 Ideas for Making Low-Cost Physical Education Equipment.* Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1963.

Provides information and illustrative material about homemade equipment for use in: 1) aquatics, 2) games of low organization, 3) gymnastics, 4) individual and dual sports, 5) rhythmics, and 6) team sports. Most equipment described can be built inexpensively, with simple tools, from easily obtained materials, and without special industrial arts training.

7. GORDON, Ronnie. *The Design of a Pre-School Therapeutic Playground: An Outdoor "Learning Laboratory."* Rehabilitation Monograph 47. New York, New York: Institute of Rehabilitation Medicine, New York University Medical Center, 1972.

Description and photography of the Jessie Stanton Developmental Playground for pre-school handicapped children facility and the equipment that is employed for the participants.

8. ISRD Committee on Technical Aids and International Cerebral Palsy Society. *Aids for Children: Technical Aids for Physically Handicapped Children.* Sweden: ICTA Information Centre (Fack, S-161 03 Bromma 3), April 1972. $2.00.

A compilation of equipment and aids in the form of an international catalogue developed in collaberation with International Cerebral Palsy Society and the Swedish government. A well illustrated manual for aids for physicotherapy, occupational therapy, locomotion, and school aids.

9. INFORMATION and Research Utilization Center in Physical Education and Recreation for the Handicapped. *Guide for Homemade Innovative Play Equipment for Activities in Physical Education and Recreation for Impaired, Disabled, and Handicapped Participants.* Washington, D.C.: American Association for Health, Physical Education and Recreation, May 1973.

Homemade and inexpensive equipment, supplies, and adapted devices are described for use in physical education and recreation to fulfill the need for such apparatus for use with participants who were in large groups, had different interests, exhibited diverse abilities or who were in programs with limited budgets. Materials are adaptable

to, applicable for, and usable by groups and individuals of all ages, descriptions, and functional levels. Users are expected to improvise, modify and adapt equipment to meet needs, interests, and abilities of participants. Following sections on Introduction, Key to Abbreviations and Terminology, Detailed Progression of Balance Activities (for performance on equipment), and Resistance Activities (using homemade equipment), the major part of the guide deals with equipment which may be made. This section gives line drawings of equipment which show proper dimensions for construction, representative examples of activities which might be used in sequential progression with the equipment, purpose of activities, helpful hints on improving or modifying performances, safety considerations, and materials needed for construction. The appendices include suggestions for additional equipment and a classification index for finding devices and equipment in the guide according to purpose.

10. MILLER, Peggy L. *Creative Outdoor Play Areas.* Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1972.

    Contains pictorial sketches and photographs of play areas and individual pieces of equipment along with suggestions on what can be done, why it is essential, and how to achieve wholesome, creative play areas for children.

11. NATHEN, C., A. Slominski and P. Griswald. *Please Help Us Help Ourselves: Inexpensive Adapted Equipment for the Handicapped.* Indianapolis, Indiana: Indiana University Medical Center (Occupational Therapy Department), 1970.

12. PLAYGROUND Corporation of America. *Helping Rehabilitate the Handicapped Child Through Successful Physical Play.* Long Island, New York: the Corporation, 1969.

    Reports from a news symposium in New York City in 1969 to introduce new concepts for helping rehabilitate handicapped through successful play in an environment called "Playscape." Appropriate for blind, mentally retarded, emotionally disturbed, deaf or multiple handicapped.

13. ROBINAULT, Isabel P. editor. *Functional Aids for the Multiply Handicapped.* Hagerstown, Maryland: Harper & Row, Publishers, Inc. (Medical Department, 2350 Virginia Avenue), 1973. $10.00.

    A well illustrated book giving descriptions, sources and information on aids for 1) transfer, travel and mobility, 2) personal care, 3) communications and learning and 4) recreation.

14. Van der Smissen, Betty and Helen Knierim. *Fitness and Fun Through Recreational Sports and Games.* Minneapolis, Minnesota: Burgess Publishing Company, 1964.

    Rules and directions for conducting various recreational sports and games are included along with sketches and plans for constructing equipment needed in the listed activities.

E. EVALUATION

1. BOWERS, L. *A Program of Developmental Motor Activities for Retarded Children.* Unpublished mineographed material. Tampa, Florida: University of South Florida (Department of Health and Physical Education), n.d. pp. 9-10.

   This program contains measures of neurological fitness and a developmental program (including evaluative approaches) involving movement exploration, balance, trampoline, and perceptual activities.

2. BROWN, Gerri A., Barbara L. Kuelling and Janet M. Dickson. "Objective Measurement of Motor Skill Acquisition: Clinical Reports." Physical Therapy 53: 8: 864-866; August 1973.

   Description of a motor development checklist--functional independent ambulation which is employed by physical therapists at State Home and Training School, Wheatridge, Colorado. The scale is used with residents who are primarily profoundly or severely retarded. Overall programs include 1) functional head control, 2) rolling, 3) independent sitting, 4) crawling, 5) kneel-standing/kneel-walking, 6) functional independent ambulation and 7) independent wheelchair function.

3. CORBIN, Charles B. *A Textbook of Motor Development.* Dubuque, Iowa: William C. Brown Company Publishers, 1973.

   Contents describe characteristic motor development patterns of children, reasons as to why children develop as they do and speculation regarding potential motor performance of children. Knowledge of motor skill progression and use of stated evaluative criteria will assist the reader to determine motor development skills of program participants.

4. CRATTY, Bryant J. *Perceptual and Motor Development in Infants and Children.* New York, New York: The MacMillan Co. (866 Third Avenue), 1970.

   Discussion of research findings with relationship to perceptual and motor developmental stages in infants and children. Information is given for assistance in analyzing sequential skills and evaluating each individual's functional levels.

5. EDUCATIONAL Test Bureau. *Oseretsky Tests of Motor Proficiency.* Minneapolis, Minnesota: Educational Publishers, Inc. n.d.

This is a maturation scale of motor proficiency which resembles the Binet Intelligence Test in construction. It gives a motor age for children 4 to 16 years of age and distinguishes four grades of motor proficiency. Items are scored on a pass-fail basis and are divided into six categories: static coordination, dynamic manual coordination, general dynamic coordination, speed, simultaneous movement, and synkinesia. Several revisions have been made of this test by American investigators: R. L. Berk, *A Comparison of Performance of Subnormal, Normal, and Gifted Children on the Oseretsky Tests of Motor Proficiency.* Doctoral dissertation. Boston, Massachusetts: Boston University School of Education, 1957. R. H. Cassel, "The Vineland Adaptation of the Oseretsky Tests," Training School Bulletin 46: 3; 4; 1949. (Monograph supplement, series number 1); William Sloan, "The Lincoln-Oseretsky Motor Development Scale," Genetic Psychology Monographs 51: 183-252; 1955.

6. ESPENCHADE, Anna S. and Helen M. Eckert. *Motor Development.* Columbus, Ohio: Charles E. Merrill Publishing Co., 1967.

Stages of motor development are described from the prenatal stage to old age. The descriptions of progressive stages, along with the evaluative criteria referred to at appropriate levels, provide adequate information for the practitioner to determine functioning levels of participants. Heredity, prenatal maternal influences and sensory-motor differentiation and integration are discussed.

7. FRANKENBURG, William K. and Josiah B. Dodds. *Denver Developmental Screening Test.* Denver, Colorado: University of Colorado Medical Center, 1966.

This test was devised and standardized to provide a simple, clinically useful tool to assist in the early detection of children with serious developmental delays. It can be used by people who have had no training in psychological testing; it is simple to administer and interpret. The DDST evaluates these functions: gross motor, fine motor--adaptive (the use of hands, and as the child grows older, his ability to solve nonverbal problems), language (the ability to hear and talk), personal-social (the ability to perform tasks of self-care and to relate to others). The test is not designed to give a developmental or mental age, nor a development or intelligence quotient; it is to be used to call attention to the possibility of developmental delays so that appropriate diagnostic studies may be pursued.

8. FREDERICKS, H. D. Bud, Victor L. Baldwin, Philip Doughty, and L. James Walter. *The Teaching Research Motor-Development Scale for Moderately and Severely Retarded Children.* Springfield, Illinois: Charles C. Thomas, Publisher (301-327 East Lawrence Avenue), 1972. $7.00.

   Scale is designed to measure motor proficiency in much the same way as the Lincoln-Oseretsky Motor Development Scale. Teachers of moderately and severely retarded children can use this scale in either classroom or physical education programs. Scale measures motor proficiency in 17 areas ranging from ambulation ability to fine finger dexterity. No norms are assigned; performance measured against future or past performances or against some arbitrary standards which examiners or teachers prescribe.

9. GODFREY, Barbara B. and Newell C. Kephart. *Movement Patterns and Motor Education.* New York, New York: Appleton-Century-Crofts (Division of Meredith Corporation, 440 Park Avenue, South), 1969.

   This book contains information on motor activity, movement patterns and a Movement Pattern Profile. The profile provides checklists that are designed to evaluate the major basic human movement patterns and are intended to give a status assessment of patterns fundamental to human performance which form the foundation of human movement. Walking, running, jumping, hopping, skipping, sliding, crawling, climbing, rolling, standing, throwing, catching, hitting, kicking, pushing, and pulling are movements included. These checklists are suitable for use by either trained or untrained personnel.

10. KOPP, Claire B. editor. *Readings in Early Development for Occupational and Physical Therapy Students.* Springfield, Illinois: C.C. Thomas, 1971.

   This book describes the development of infants and children and discusses how interaction is made with the environment. The readings are selected on the basis of recent studies and theories. The level of information is aimed toward occupational and physical therapy students but can also be used by physical education and recreation personnel. Progressive stages in neurophysiologic, sensory, motor, perceptual, cognitive, language, body image, laterality, emotional, and social development.

11. LANDSMAN, M. and H. Dillard. *Evanston Early Identification Scale.* Chicago, Illinois: Follet Educational Corporation (1010 W. Washington Blvd.), n.d.

   This test identifies children who can be expected to have learning disabilities. Items include body awareness, social-emotional development and ability of child to draw a figure of a person.

12. LOEWENDAHL, Evelyn. *Exercises for the Mentally Retarded: How To Develop Physical Functions in the Growing Child.* Swarthmore, Pennsylvania: Croft Inc. (100 Park Avenue), 1967.

Principles in interpreting physical levels of motor growth and development in the mentally retarded child are described. Developmental levels show skeletal and nerve muscle growth desirable for each year of growth from three to sixteen years, and describes exercises and physical activities recommended.

13. McGAHAN, F. E., and C. McGahan. *Early Detection Inventory (EDI).* Chicago, Illinois: Follet Educational Corporation, 1967.

This inventory is designed for preschool children in transitional and ungraded primary classes. Items include 1) readiness for school, 2) social and emotional development, 3) motor performance and 4) personal history. Comments: Identifies children with potential problems, offers guidelines for curriculum planning and suggests use of other sources for follow-up procedures.

14. MUNDY, J. *A Special Diagnostic Battery of Recreative Functioning for the Trainable Mentally Retarded.* Tallahassee, Florida: Florida State University (Department of Recreation), 1966.

This instrument measures skills, abilities, and competencies needed by an individual if he is to participate successfully in different recreational activities. By looking at an individual's profile, the recreation leader can guide the participant into activities consistent with his level, degree, and kind of ability so he will have a greater chance for immediate success and achievement.

15. ORPET, R. E. and T. L. Heustis. *Move-Grow-Learn Movement Skills Survey.* Chicago, Illinois: Follet Educational Corporation, 1971.

This list was developed to assist classroom teachers, movement education supervisors, school psychologists, and other professional school personnel in evaluating selected aspects of a child's motor development. It is intended for use with the Frostig-Maslow Move-Grow-Learn program and with Movement Education: Theory and Practice. Eight broad areas of sensory-motor and movement skills are included: 1) coordination and rhythm, 2) agility, 3) flexibility, 4) strength, 5) speed, 6) balance, 7) endurance (only children eight years old or older should be rated on endurance), and 8) body awareness. This is not a standardized psychometric instrument in which developmental norms are provided for each age level. The assessment is based upon the examiner's observations of the child in classroom, playground, and gymnasium activities.

16. REPORTING Service for Exceptional Children. *T.M.R. Performance Profile.* Ridgefield, New Jersey: Reporting Service for Exceptional Children (563 Westview Avenue, 07657), n.d.

This evaluation scale, based upon observation, presents graphically the current status of an individual child, to help the teacher or leader

evaluate more readily existing needs, to plan for individual growth, and to record change and development. The six major areas most frequently referred to in curriculum guides for the severely and moderately retarded are used as the basis for the profile (social behavior, self-care, communication, basic knowledge, practical skills, and body usage). The section on body usage is subdivided into coordination, health habits, fitness and eye-hand coordination. Various indexes make it possible to evaluate one major area against another and to assess progress in the various areas from year to year.

17. WABASH Center for the Mentally Retarded, Inc. *Guide To -- Early Developmental Training*. Indianapolis, Indiana: Indiana State Department of Public Instruction, 1972.

A training guide for children who, because of age or handicapping condition, are functioning on early developmental levels. Activities are designed for children from infancy through six years of age. Individualized instruction based upon functional levels ascertained by specific evaluative criteria is presented: perceptual-motor, cognitive development, language development, self-care and number concepts.

18. WEBB, Ruth C. "Sensory-Motor Training of the Profoundly Retarded." American Journal of Mental Deficiency 74: 283-295; 1969.

Description of sensory-motor techniques and their empirical rationale designed for profoundly retarded residents of Glenwood State Hospital School, Glenwood, Iowa. Four areas of underdeveloped behavior are listed: 1) level of awareness, 2) movement, 3) manipulation of environment, and 4) posture and locomotion. The article includes the Awareness, Movement, Manipulation of Environment, Posture and Locomotion (AMMP) Index which is used for evaluating behavioral levels.

19. WICKSTROM, Ralph L. *Fundamental Motor Patterns*. Philadelphia, Pennsylvania: Lea and Febiger, 1970.

Detailed descriptions of basic motor skill patterns which are progressively refined to specific sport skill movement patterns at a later chronological age. Practitioners may determine skill levels of program participants by reference to the sequential skill progression stages.

C. PHYSICAL AND RECREATIONAL ACTIVITY PROGRAMS
ADDENDUM

1. AMERICAN Association for Health, Physical Education, and Recreation. *The Best of Challenge II.* Washington, D.C.: the Association, 1974.

   Compilation of articles from Challenge, AAHPER's newsletter for special educators, physical educators, recreation and related personnel. Designed as a basic or supplementary text for college courses, and as a reference for workshops, clinics, seminars, institutes, classes, and similar in-service and pre-service programs.

2. BRADTKE, Louise M., William J. Kirkpatrick, Jr., and Katherine P. Rosenblatt. "Intensive Play: A Technique for Building Affective Behaviors in Profoundly Mentally Retarded Children." Education and Training of the Mentally Retarded 7:1: 8-13; February 1972.

   Article discusses value of intensive play in working with profoundly mentally retarded children according to the methods used at the authors' BKR Experimental Project at the Sunland Training Center in Miami, Florida. Adults work with only one child during a 30-minute play session, which is specially planned for that child, using intensive play to develop responses to close body contact and physical stimulation and to break through the typical fearfulness and unresponsiveness of these children.

3. KECK, S. Annette, Constance R. Curry, Gale Salzman, and Carol Arslander. *Day Camping for the Trainable and Severely Mentally Retarded: Guidelines for Establishing Day Camp Programs.* Springfield, Ill.: Division of Mental Retardation, Department of Mental Health (401 South Spring Street), April 1970.

   Prepared by regular and consultant staff of Herman M. Adler Zone Center (Champaign, Illinois) to meet the need of community recreation personnel for a handbook on camping for the trainable and severely mentally retarded. Sections deal with administering a day camp, physical activities, arts and crafts activities, music activities, sample schedules, forms, job descriptions for staff, materials, and a selected bibliography.

4. SCHEER, Ralph M. "Fusion of Social Group Work and Recreation Skills in Providing Service to the Mentally Retarded." Training School Bulletin 65:1: 21-27; 1968.

   This article discusses the leisure revolution and effect that this phenomenon is having on society in general and for the retardate specifically. The question is raised as to whether or not sterile programming is frequently offered the institutionalized retardate instead of needed creative emotional experiences.

5. THOMPSON, Travis and John Grabowski, editors. *Behavior Modification of the Mentally Retarded.* New York City: Oxford University Press, Inc. (200 Madison Avenue), 1972.

This book documents how the Fairbault State Hospital in Minnesota transformed itself from a largely custodial institution to an educational therapeutic environment through the systematic application of behavior modification procedures. Described in detail are: initial ward-wide behavior modification programs for children; special programs for the most seriously retarded and emotionally disturbed adult patients; a token reinforcement system for women, the presentation of which includes a comparative study of behavior modification and drug therapy; and the use of behavior modification procedures in special education classrooms and in occupational and recreational therapy. Because all the patients are profoundly retarded, the programs focus first on developing self-care skills and then on educational, recreational, interactive, and vocational skills, while at the same time controlling and eliminating disruptive and destructive behavior.

6. THERAPEUTIC Recreation Journal. "Special Issue: Therapeutic Recreation Service and Mental Retardation." Therapeutic Recreation Journal 3:3: 1-36; Third Quarter, 1969.

Special issue includes articles in the following areas: therapeutic recreation for the profoundly retarded, improving services, rights of the retarded, federal support of recreation, recreation services in Kansas, and initiating a program in cottages for the severely and profoundly retarded.

7. WOLINSKY, Gloria F. and Nancy Koehler. "A Cooperative Program in Materials Development for Very Young Hospitalized Children." Rehabilitation Literature 34:2: 34-46; February 1973.

Information is given on equipment and materials to be used with infants and toddlers who are confined to cribs during hospitalization away from the home environment. The materials for tactile, visual, auditory and kinesthetic stimulation are designed for children who function at normal and below normal intellectual levels. The crib play materials are suitable for profoundly retarded individuals.

PART THREE

RESOURCE INFORMATION CONTACTS

1. AMERICAN ASSOCIATION FOR MENTAL DEFICIENCY
   5201 Connecticut Avenue, N.W.
   Washington, D.C. 20015

2. THE AMERICAN OCCUPATIONAL THERAPY ASSOCIATION, INC.
   6000 Executive Boulevard, Suite 200
   Rockville, Maryland 20852

3. AMERICAN PHYSICAL THERAPY ASSOCIATION
   1156-15th Street, N.W.
   Washington, D.C. 20005

4. ASSOCIATION FOR CHILDHOOD EDUCATION INTERNATIONAL
   3615 Wisconsin Avenue, N.W.
   Washington, D.C. 20016

5. COUNCIL FOR EXCEPTIONAL CHILDREN
   1920 Association Drive
   Reston, Virginia 22091

6. EARLY CHILDHOOD EDUCATION-ERIC Clearinghouse
   University of Illinois
   Urbana, Illinois

7. NATIONAL ASSOCIATION OF PRIVATE RESIDENTIAL FACILITIES FOR THE MENTALLY RETARDED
   1906 Association Drive
   Reston, Virginia 22091

8. NATIONAL ASSOCIATION FOR RETARDED CITIZENS
   2709 Avenue E East
   Arlington, Texas 76010

9. NATIONAL REHABILITATION ASSOCIATION
   1522 K Street, N.W.
   Washington, D.C. 20005

10. NATIONAL THERAPEUTIC RECREATION SOCIETY
    1601 North Kent Street
    Arlington, Virginia 22209

11. THE PRESIDENT'S COMMITTEE ON MENTAL RETARDATION
Washington, D.C. 20201

PART FOUR

AUDIOVISUAL AIDS

1. Aids for Teaching the Mentally Retarded (16mm, sound, color, 38 1/2 minutes). Thorne Films, Inc., 1229 University Avenue, Boulder, Colorado. (Available as one film or five separate ones.)

   This series was developed to help fill deficiences of resources available for in-service training in the field of mental retardation. The films were taken at Laradon Hall School for Exceptional Children, Denver, Colorado, to show a functional teaching approach that stresses gradual instruction, transition from one activity to another, and initial object-orientation from which abstraction may follow. Scenes show that trainable persons (IQ 25-50) can learn through a series of concrete, object-oriented retarded activities. Various mechanical devices used in this program to develop motor, sensory-perceptual and integrated motor-perceptual skills are unique in their application, but not in their availability. Many are being made by retarded persons in sheltered workshops. Construction often requires only basic knowledge of wood working, some inexpensive lumber, and paint.

2. Audio-Visual Media and Materials on Mental Retardation. National Association for Retarded Children, 2709 Avenue E East, Arlington, Texas 76011, $.50.

   Listing of available films and other audiovisual materials dealing with mental retardation includes a brief annotation of each; this guide was prepared and designed by practitioners in the field.

3. Cast No Shadow (16mm, sound, color, 27 minutes). Professional Arts, Inc., Box 8484, Universal City, California.

   This unique and dramatic film vividly depicts a wide range of recreation activities for severely and profoundly mentally retarded, physically handicapped, multihandicapped, and emotionally disturbed children, teens, and adults at the Recreation Center for the Handicapped (San Francisco, California). Emphasis is on values of recreation and its effects upon lives of handicapped persons as an integral part of their total learning experiences and social development. Equally, it is about handicapped individuals, ages 2 to 85, as people. Enthusiasm, satisfaction and enjoyment are shown on their faces as they participate in a variety of activities from snow skiing at Squaw

Valley's Olympic Village to wheelchair surfing in the Pacific Ocean.

4. Catalog of Audio-Visual Aids for Counselor Training in Mental Retardation and Emotional Disability. The Devereux Foundation, Devon, Pennsylvania 19333.

   This annotated listing of audiovisual materials includes those felt to be most appropriate for use in university counselor-training programs and in agency in-service training programs preparing staff to work with mentally and/or emotionally handicapped persons.

5. Chance to Live (16mm, sound, color, 18 minutes). South Carolina Association for Retarded Children, 1517 Hampton Street, P.O. Box 1564, Columbia, South Carolina.

   This film describes the problems facing parents of mentally retarded children and the need for community services, day care centers, developmental centers, sheltered workshops and group homes. The Orange Grove program in Chattanooga, Tennessee is depicted with the focus on programing in South Carolina.

   In day care settings, activities that stress socialization, skill development, and parent activities, are described. It is noted that persons are not institutionalized unless community services are not available. In the developmental center setting, the gap between day care and school or workshop is bridged. Much emphasis is given to skill development, habits and use of leisure hours in addition to deinstitutionalization. A sheltered workshop for the blind/mentally retarded is dealt with for meeting individual needs. In halfway houses (community homes), persons learn to live independently socially and economically. Supervision is given by house parents who provide a meaningful home to assist the people find a place in the world. Notation is made of services available in South Carolina and the need for emphasis on community services.

6. IMC/RMC Network Professional Film Collection (second edition). Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091

   The catalog lists and describes 293 films concerning handicapped children which are available from the Instructional Materials Centers and Regional Media Centers Network; art for exceptional children, autism, behavior management, gifted, disadvantaged, early childhood and preschool, emotionally disturbed, hearing/deaf and hard of hearing, learning disabilities, mentally handicapped, multiply handicapped physically handicapped, psychology, reading, sight/visually handicapped,

special education, speech/speech impaired, teacher training, tests, vocational education, and miscellaneous.

7. Mental Retardation Film List. Division of Mental Retardation, Social and Rehabilitation Service, National Medical Audiovisual Center, U.S. Department of Health, Education, and Welfare, Washington, D.C.

   Resource listing of selected audiovisual materials for use in mental retardation education programs. Films for use by the general public are grouped under heading of nonprofessional and include nature of mental retardation, its causes, general treatment, and prevention. Other films dealing with specific aspects of diagnosis, clinical treatment, rehabilitation, and control are listed in the professional section. Films are listed alphabetically in the descriptive sections and in the title index.

8. Mental Retardation Films. Parsons State Hospital and Training Center, 2601 Gabriel, Parsons, Kansas 67357.

   Listing of 16mm films on mental retardation is an outgrowth of the International Film Festival on Mental Retardation. Each film was checked to determine its direct relationship to the field of mental retardation and to eliminate films dealing with subjects peripheral to the field.

9. Movement Education (K-3). American Association for Health, Physical Education, and Recreation, 1201 16th Street, N.W., Washington, D.C. 20036.

   A series of film loops dealing with basic movement, movement awareness, basic manipulative activities, and functional fitness. For a descriptive catalog and price list, write AAHPER.

10. Recreation Center for the Handicapped (16mm, sound, color, 23 minutes). East of the Mississippi River apply to Audio-Visual Studio, National Education Association, 1201 Sixteenth Street, N.W., Washington, D.C. 20036; west of the Mississippi River apply to Mrs. Morris Pomeroy, Director, Recreation Center for the Handicapped, Great Highway near Sloat Boulevard, San Francisco, California.

    Founded in 1952, the Recreation Center for the Handicapped provides year round programs for severely handicapped participants of all ages. The program stresses achievement of happiness and contentment as each individual, regardless of his condition, learns to do for himself and to stand on his own two feet. The film shows participants active in checkers, music activities (tamborine and bongos), clay work, outdoor activities, table games, wrestling, swimming, fishing and casting, woodworking

playground activities, snow and winter activities, and dancing. Some of the many ways in which the participants help each other are vividly shown.

11. Somebody Waiting (16mm, sound, color, 25-minutes). Extension Media Center, University of California, Berkeley, California 94720.

This is a compelling story about children who live in Corcoran Cottage, Sonoma California State Hospital. They have severe cerebral dysfunction and are among the most physically, emotionally, and mentally handicapped children in society. They are totally dependent on the hospital staff for every physical, nutritional, and personal need. The film demonstrates that further handicapping can be avoided by appropriate environmental stimulation and therapeutic handling. It vividly shows the children's response to loving care, new physical therapies, and new experiences. The staff begins to learn, first from visiting professionals such as physical therapists and later from their own experience, how to make life more pleasant, interesting, and rewarding for the children--and themselves.

12. Where Do the Children Play? (16mm, sound, color, 15-minutes). National Association for Retarded Children, 2709 Avenue E East, Arlington, Texas 76011.

Today many severely or profoundly retarded children do not have to be institutionalized--they can live at home if there are sufficient and appropriate services in the community to meet individual and family needs. This documentary stresses need for community day training programs for such children. In the film the hopes of a young couple are shattered when their first child is diagnosed as profoundly retarded. The option of community-based services is contrasted with the traditional alternative of institutionalization. Scenes from various day training programs are shown and professionals, volunteers, and parents who work in these programs discuss the issue of providing developmental programs within the community. Many scenes show these children at play in the out-of-doors, on field trips, in parks, and in developmental activities such as body identification, self-care, and patterning. The film ends on the question as to where do the children play emphasizing the potential and individuality of each child to reduce or eliminate dehumanization of any group or individual.

PART FIVE

EXAMPLES OF ON-GOING PROGRAM APPROACHES

PORTERVILLE STATE HOSPITAL

Porterville State Hospital, California, conducted a project on "Total Care of the Multi-Handicapped Child" from June 1969 to May 1972. The Final Report of that project, funded by H.E.W., Division of Mental Retardation - Hospital Improvement Project is available from Ruth E. Smith, Ph.D., Porterville State Hospital, P.O. Box 2000, Porterville, California 93257. The project was a comprehensive treatment program for severely and profoundly retarded, multi-handicapped individuals with the following program objectives:

A. Motor

1. Prevent or reduce contractures, orthopedic deformities and skin breakdown.
2. Normalize muscle tone, muscle strength and motor coordination.
3. Increase voluntary movement of arms and legs with the particular goal of developing reaching, grasping, and ambulation.

B. Cognitive/Social

1. Increase response to and attention to environment.
2. Improve discrimination of different sensory stimuli.
3. Increase awareness of and responsiveness to other people.

C. Nutritional

1. Improve nutritional status and thereby general health.
2. Develop or normalize oral reflexes and oral sensitivity.
3. Develop or improve chewing techniques.

Also available are:

. audiovisual materials: 34-minute video tape (1/2" Sony format) 16mm kinescope, 35mm slides.
. F - 18 Ideas and Equipment guide.
. Objective Games materials.

The rationale and the objectives stressed by the above games materials are listed as follows:

Why Play Games?

We are all trying to help our residents to be self sufficient. We are trying to teach them adaptive skills, for example: toilet training, use of spoon, table manners, etc. When we try to accomplish an objective in these areas we find that we must first teach a number of sub-skills. A resident cannot be "toilet trained" if he can't button and unbutton; a resident can't use a spoon if he can't hold it; and a resident can't acquire table manners if he can't, or won't sit in a chair. We find that we must teach these "sub-skills" if we are to accomplish our objective. At this point we find the games helpful. There are games on the list, indexed by the service objective which may make the learning of these new skills fun.

One game may be used to develop many sub-skills and there are games which not only teach self skills but also help our residents use their bodies for these adaptive skills. When the games are played by the resident group, several benfit at the same time and there is added socialization.

If these games are played over and over again and varied with other games, we will find that our residents are becoming better able to button, to hold objects or sit in chairs. We then go on to the next step. The group leader of the resident groups is in the best position to know what should be focused on next. He knows what his resident can do with his body, his speech, his ability to understand, and his level of development. He also knows what the other residents in his group can do with their bodies and can devise games which will make the learning of the next step fun!

If you don't believe that your resident group can play a particular game because they can't tolerate competition, then modify the game. Change the rules to eliminate the competition and let them play for the sheer enjoyment of the activity.

1. Body Alignment and Joint Mobility Development Service Objectives

   a. To develop body alignment abilities
   b. To develop motor strength (as in spasticity and contractures)
   c. To develop body flexibility
   d. To enhance range of motion
   e. To develop gross coordination abilities

2. Sensory Responsitivity Improvement Service Objectives

   a. To improve visual perception skills
   b. To improve auditory (hearing) perception skills
   c. To improve sensory perception skills of other special senses
   d. To develop environmental awareness skills

3. Basic Body Movement Development Service Objectives

   a. To develop lying positions movement skills
   b. To develop four-point position movement skills
   c. To develop sitting position movement skills
   d. To develop kneeling position movement skills
   e. To develop standing position movement skills
   f. To develop self-transfer movement skills

4. Physical Functioning Development Service (With or Without Orthesis) Objectives

   a. To improve body awareness skills
   b. To improve gross motor coordination abilities
   c. To improve fine motor coordination abilities
   d. To improve sensori-motor performance abilities
   e. To improve neuromuscular control
   f. To improve locomotor and/or ambulation skills

5. Socio-Psychological Development Service Objectives

   a. To improve psychomotor performance status
   b. To improve cognitive performance status
   c. To improve affective performance status
   d. To improve emotional development status
   e. To improve language development status
   f. To improve social development status
   g. To improve character development status

6. Personal Self-Care Development Service Objectives

   a. To develop self-feeding skills
   b. To develop self-toileting skills
   c. To develop self-washing skills
   d. To develop self-bathing skills
   e. To develop self-dressing skills
   f. To develop self-hygiene skills
   g. To develop self-grooming skills
   h. To develop independent trans-location skills
   i. To develop mechanical aide and/or special devices and skills

7. Pre Formal Education Service Objectives

   a. To increase attention span
   b. To develop seeing and listening skills
   c. To enhance language development
   d. To enhance social interaction skills
   e. To develop basic concepts of the physical world

f. To increase functional vocabulary skills
g. To enhance graphic expression skills
h. To improve social responsibility skills
i. To improve impulse control skills
j. To develop reading readiness skills
k. To develop special deaf-blind living skills

8. Formal Education Service Objectives

a. To develop speaking skills
b. To develop reading skills
c. To develop writing skills
d. To develop mathematics skills
e. To develop concepts of time, place, and order
f. To develop thinking and reasoning skills
g. To develop geography and social science skills
h. To develop scientific knowledge use skills
i. To develop physical fitness skills
j. To develop moral and spiritual values
k. To develop pre-vocational skills
l. To develop health and welfare skills
m. To develop special deaf-blind learning skills

9. Life Enrichment Training Service Objectives

a. To develop individual and dual game skills
b. To develop group games and recreational activity skills
c. To develop team sport skills
d. To develop dramatic arts and role-playing skills
e. To develop musical, vocal, and rhythmic skills
f. To develop arts and crafts performance skills
g. To develop outdoor life skills
h. To develop leisure-time utilization skills
i. To develop spectator sports utilization skills
j. To develop special deaf-blind coping skills

10. Vocational Training Service Objectives

a. To develop basic work training attitudes and habits
b. To develop task performance skills
c. To develop sheltered-employment work skills
d. To develop community-placement work skills
e. To develop trade and industrial career skills

11. Independent Functioning Development Service Objectives

a. To develop personal property care skills
b. To develop room care skills

c. To develop housekeeping skills
d. To develop home technical skills
e. To develop property maintenance
f. To develop pet care skills
g. To develop social role skills
h. To develop citizenship role skills
i. To develop economic role skills
j. To develop worker role skills
k. To develop public services utilization skills
l. To develop life enrichment opportunities utilization skills
m. To develop personal and social safety skills
n. To develop general safety skills
o. To develop general survival skills

PENNHURST STATE SCHOOL AND HOSPITAL

The present Pennhurst model (which is also described in the attached article at the first of this information sheet) employs data-based programing for moving each individual sequentially through his own "developmental hierarchy from one stage of treatment and development to other more complex stages."

"The three-stage workshop with an average weekly payroll of over one thousand dollars combined with a realistic scrip economy obliterates peonage and enhances the dignity of work. Functional on-ward behavioral in-service training liberates child care workers from custodial chains and cloaks them with programing skills. Multi-disciplinary efforts focus on an individual program for every citizen--a program with definitive short and long term goals and procedures and strategies to achieve them. Simulated on-grounds coummunity orientation programs ease the transition into the main stream community. Advocacy programs; sexuality education; mobility instruction; unique stimulus enriched environments; a communication center for the deaf; extensive volunteer resource efforts; over three hundred recent successful community placements; foster grandparents; data-based school programs; modular homes; and the list goes on."

Materials and printed papers are available from Dr. Robert Smilovitz, Pennhurst State School, Spring City, Pennsylvania 19475.

RECREATION CENTER FOR THE HANDICAPPED, INC.

The Recreation Center for the Handicapped, Inc., San Francisco, California, is a non-profit corporation dedicated to bringing happiness and companionship to severely mentally retarded and physically handi-

capped children, teens, and adults. This community program provides day care recreation, camping, an early infant stimulation program, homebound recreation, teen program, adult education program, and a variety of other services.

RANIER SCHOOL

In addition to a strong recreation program at Ranier School, Buckley, Washington, a program aide project called "Mission Hope" strives toward the goal of improving physical, emotional and social functions of the severely and profoundly mentally retarded residents at the state school. A program aide is described as a motivational catalyst who stimulates the resident towards reaching his fullest potential either by an open-structured approach or a structured program. In open structure, the aide provides opportunities for the resident to explore and respond to many different stimuli and situations in his own individual way. In the structured program, specific recreation programs for particular individual needs of the resident are offered.

EASTERN STATE HOSPITAL

An activity guide for use in personal and family care homes entitled "How to Provide a Little More than 'Room and *Bored*'" was developed by the Community Placement Program, Eastern State Hospital, Lexington, Kentucky. The guide is aimed toward assisting operators and staff of the homes in providing simple, constructive and healthy activities for the patients who have been placed in the community from the hospital. In addition to offering direct consultation and assistance, the hospital staff lists available sources in the local community, suggested equipment and facilities, information on use of volunteers, suggested activities, and references for additional information to be found in the local library.

STATE COLONY AT WOODBINE

A program for training recreation aides and attendents in creative and constructive recreational activities for profoundly and severely retarded children was developed by the State Colony at Woodbine, New Jersey. The program stresses recreational motivation which is a system of directed techniques used by the recreation worker to afford the resident the opportunity to increase his limited capabilities.

The worker meets each resident for thirty minutes to one hour at least once a week, depending upon the activities planned. A group of five to ten

residents are provided structured experience situations in the "five-area basis" for the techniques: 1) create a climate of acceptance, 2) make connections to the real world, 3) share the outside world, 4) teach the simple tasks of the cottage units, and 5) create a climate of appreciation.

BRANDON TRAINING SCHOOL

An institutional day camp for educable, trainable, severely and profoundly mentally retarded residents was conducted by the Brandon Training School, Brandon, Vermont during summer, 1972. The camp was financially supported by a Title I grant and the Parents Association of the school. Camping experiences included arts and crafts, sports, horseback riding, animal care, nature lore, hiking, music, free choice activities, evening programs, field trips, excursions, cook-outs, overnights, and special camp programs. The sixty-seven severely and profoundly mentally retarded residents showed 1) the greatest arts and crafts skill development indicating "that impact was greatest upon them as their need for development is greatest," 2) the largest increase in physical education and developmental skill development indicating "that increased activity was very beneficial to their physical health, and 3) high percentage of improvement in horseback riding (along with similar improvement in trainable level residents) indicating "impact on TMR and SPMR is greater because these residents have usually less activity involvement."

COLDWATER STATE HOME AND TRAINING SCHOOL

In addition to a well developed play therapy and perceptual-motor program, the Coldwater State Home and Training School, Coldwater, Michigan, used thirteen and fourteen year old volunteers in a special summer project. Between five to eight junior high students, including a special education student, from Quincy, Michigan worked under the direct supervision of a physical education teacher at the school during a three day a week, one and one half hour daily, special play therapy program. Seventeen profoundly retarded residents (ten wheelchair-bound and seven ambulatory) were provided play on an elevated sandbox, water play on an elevated wading pool, and toy play. The supervisor considered the young volunteers to be the best of workers she had ever worked with in eleven years of teaching.

CHILD DEVELOPMENT DAY ACTIVITY CENTER

In 1966, the Child Development Day Activity Center was established at St. Louis University in Cardinal Glennon Memorial Hospital for Children. In response to a growing awareness of the stimulating and nurturing effect of the home instead of the institution, day activity programs were provided to: 1) offer day training for severely and profoundly retarded children for whom there were no existing day educational facilities; 2) demonstrate not only the necessity but also the feasibility of this program; and 3) provide a situation for research and training with these children. Information on administration indicates that day training is not appropriate for all profoundly retarded, especially those who 1) have gross physical impairment, 2) are non-ambulatory, 3) are tube-fed, 4) are non-responsive to environment, 5) are extremely hyperactive, destructive, and disruptive, 6) are intolerant in group situations, and 7) have family problems. The Center Staff stresses that their program is not group "baby-sitting."

FAIRVIEW HOSPITAL AND TRAINING CENTER

A new Title I project is provided at Fairview Hospital and Training Center, Salem, Oregon for some of the severe and profoundly retarded residents. The Activity Center Program consists of 2 to 3-hour blocks of time in which 75 residents in each group walk from their cottage to the Activity Center, take part in activities and return. The program includes gross and fine motor coordination, musical activities, arts and crafts, physical activity, movement exploration, and a creative playroom. Six recreation staff members and four cottage attendants are involved in the supervision of the project.

CHAPTER VI

THE STATE OF THE ART:

DIRECTIONS FOR PRACTICE AND RESEARCH

by

Dr. Julian U. Stein
Consultant, Programs for the Handicapped
American Association for Health, Physical Education
and Recreation
Washington, D. C.

Paper Presented at

"Motor Development Workshop: From Classroom to Playground"
University of Maryland
College Park, Maryland 20742

April 25, 1975

The problem with research is that we use it like a drunk uses a lamp post - for support rather than illumination!

Recent legislation enacted in California mandates school programs for all four year old children. Similar legislation is being considered in New York State for three year old youngsters. Other states, many professional organizations, various volunteer agencies, and countless individuals champion the cause of starting all children in formal education programs at earlier and earlier ages. This represents just one of confusing, apparently contradictory, and difficult, if not impossible to understand, situations and circumstances confronting educators, parents, legislators, the lay public, and others interested in the good and welfare of all children.

Comprehensive analyses by groups outside of California and apparently impartial individuals of the same studies that provided rationale and support for the California mandate indicate that children as a group should start into formal education programs later, not earlier as in the current movement! Other reports indicate that the three R's should be saved for junior high school! The importance of early informal learning experiences, parental involvement, home intervention, family participation, along with a later starting age for formal schooling are factors that need to receive greater consideration and more emphasis for optimal child growth and development; early successes and positive emotional development are being given increasing emphasis. In spite of increasing evidence to the contrary, programs continue to emphasize formal learning experience, organized activities, and cognitive or academic skills at earlier and earlier ages! Certainly there is little if any disagreement that children with definite and obvious sensory or motor deficits do need an earlier start so they can develop skills,

competencies, attitudes, and other requisite characteristics to function in the most effective manner when they do enter elementary school. Specialists in growth and development, psychologists, educators, and parents have long discussed the fact that girls mature more rapidly than boys, and that at the age of conventional school entry, girls are about a year ahead of the boys -- yet we still insist on starting everyone to school, teaching them to read, and emphasizing cognitive skills at the same time. This leads to other hard to understand paradoxes of our times --

... Growth and development are looked upon as very individual for each child, although youngsters who do not reach certain motor milestones, perform certain cognitive or academic skills, or attain specific concepts and proficiencies by a given time are considered different, slow, or even retarded!

... The importance of individualizing instruction to meet each child's needs in terms of his special interests, abilities, and ways of learning are stressed, but those who need such individualized instruction and are unable to respond and function effectively to regimented, group, class oriented activities and methods are labeled as different, difficult, deficient, or deviant!

... Attempts to identify behavioral characteristics, personal traits, and personality differences that make it more likely individual youngsters will respond effectively to specific activities, methods, procedures, or techniques are advocated, but activities, methods, procedures or techniques that can be used effectively with all youngsters are still sought!

... Play movement, motor activity, and physical proficiency are felt to be important prerequisites for sound growth and complete development, yet many early childhood education programs and projects continue to place increasing emphasis upon academic activities and cognitive development!

... Written philosophies of all schools recognize the highly individualized nature of the educational process, but remedial programs, specific projects, and special efforts have to be established before individual needs of students are met through appropriate adaptations and modifications of activities, methods, procedures, and techniques are made.

... Interdisciplinary cooperation and multiagency teamwork are by-words of the day, yet many groups and individuals give little more than lip service to this concept as shown by the amount of duplication of effort, professional jealousies, disciplinary empires, and confusion in terminology!

... Relevance and accountability are concerns of educators at every level, but too few students or consumers are given opportunities to provide input into and evaluate programs that directly affect them; too few teachers are involved in activities and procedures for which they are held accountable; and often inconsistencies abound between programs and ways in which progress is assessed!

... Understanding children, knowledge of growth and development patterns and sequences, and opportunities to observe, teach, lead, and know children without handicapping conditions are felt to be important prerequisites and form a basic foundation for those who work with youngsters who have various impairments, disabilities, or handicaps, yet earlier and earlier specialization is advocated by some persons involved in programs for special populations!

... More individualized attention through smaller teacher-pupil ratios is considered an important ingredient for programs involving special groups, but attempts to reduce these ratios through differential staffing patterns involving use of para-professionals, activity specialists, aides, attendants, and assistants are resisted by many individuals, groups, associations and unions!

... Individuals with various physical, mental, emotional, social or educational impairments, disabilities, or handicaps are said to be more like their peers and contemporaries than they are different so that discriminate integration is to be encouraged and activities provided to promote getting and keeping these populations in the mainstream of society, but separate and segregated programs continue to emphasize differences, deficiencies, disabilities and deviations!

In addition to these and many other confusing paradoxes, several additional problems contribute to the confusion, misconceptions, lack of understanding, and unsureness of ways to proceed.

... Semantics and terminology. Individuals use different terms and interpretations when referring to the same characteristics, traits, concepts, and movement patterns. Others use the same terms and interpretations when referring to entirely different characteristics, traits, concepts, movements and patterns. Also complicating this particular situation is failure to distinguish and differentiate among characteristics, and concepts, and teaching methods, techniques, approaches, and procedures. Need for consistency in terminology and in its usage, especially when personnel from different disciplines are involved, is evident and obvious. Clouding the picture and muddying the water further is a tendency to be over sophisticated, complicated, and complex in the use of words. So often a tried and true word, phrase, or term -- one that is clear, concise, and simple -- is perfectly acceptable and descriptive -- it conveys what is meant and intended but avoided like the plague so new words and terms can be introduced. For example, what do cognitive, affective, and psychomotor have that mental, emotional, and physical don't? For some reason new terms give mystery, status, and uniqueness to old wine placed in new bottles, and gives academic sanction and intellectual respectability to educational jargon-- the confusion caused matters not.

... Contradictory research. Results of studies, experimental, action, basic, applied, formal, informal, descriptive, inferential, ad infinitum, can easily be found that present diametrically opposite findings, conclusions, and recommendations! There are as many reasons for these contradictions as for differences in empirical reports, subjective observations, and just plain differences of opinion -- people, programs, methods, activities, axes to grind, preconceived ideas to prove, subjects, methodological weaknesses, over generalizations, inappropriate applications, wrong inferences, making results fit hypotheses. Attempts to apply methods, approaches, and techniques from the physical sciences to the behavioral sciences is another important but universally overlooked factor. When one chemical is mixed with another under identical conditions, resulting interactions are the same; a given power source (voltage) always provides the same current (amperage) through the same amount of electrical resistance (ohms). Most all principles, laws, and their application are consistent and constant when dealing with elements in the physical sciences. However, this concept and its application are not only inconsistent with the very basis of individual differences and all its implications for education, inter-personal relationships, and personal behavioral characteristics, but complicated further by many different factors that contribute to any situation involving people -- physical situations, other people -- peers, leaders, adult models involved in these situations, the individual's emotional climate at the time, physical problems such as illnesses or nagging inconveniences. So often research has been aimed at finding ways to incorporate all individuals with certain characteristics and traits into a given mold or program instead of identifying personal, social, emotional, physical, and related traits of individuals that will make it more likely for each to succeed under certain circumstances and with specific methods, activities, and techniques. Emphasis must be upon individualizing instruction in terms of

each person's needs -- one-to-one, small group, large group, massed, distributed, whole, part, whole-part-whole, formal, informal, structured, open, as needed.

... What's happened to childhood? Physiologists, specialists in child growth and development, teachers, and parents all tell us that children are maturing physically more rapidly today than even a generation ago. But they do not tell us that these same youngsters are maturing psychologically, emotionally and socially more rapidly; they are more worldly and sophisticated but these do not in themselves equal greater maturity. There are many indications that despite earlier physical maturation, certain elements and aspects of growth and development cannot be hurried; each child does in fact pace himself according to his own internal timetable and schedule; hurrying or delaying this can be devastating and detrimental to the individual. In fact, many people feel there is heavily represented among children who are having problems in school, a mass of idiosyncrasies and individual differences which we have chosen to regard as abnormalities, which are only individual differences. If we were prepared to accept them, they would not be cause for alarm. There is nothing wrong with the non-retarded reading-disabled child -- he simply has the individual difference that he is not by aptitude a good reader.

... Studies and observation both indicate that more children today suffer from emotional maladjustment as evidenced by incidence of peptic ulcers as early as third and fourth grade, number of high school suicides, drug problems, children needing psychiatric counseling, and various and sundry similar psychosocial problems. Often associated with these problems are different kinds and types of learning disabilities. It is crucial to ascertain exact cause and effect relationships in these cases -- are emotional problems because of learning disabilities or learning disabilities caused by emotional problems?

Methods, procedures, and attack on these problems will be quite different depending upon exact cause. Where remedial programs are effective, especially during the elementary school years, activities that are effective and well received by children are often those so typical to, of, by and for children. These same activities and this same approach are also the bases for preventative programs at earlier ages and stages. As we evaluate and assess what has happened to childhood we need to explore its relationships to and effects upon queations such as:

-- If the percentage of learning disabilities is higher today than a generation ago, why?

-- What effects to early specializations in specific activities such as Pop Warner Football, Bitty Basketball, Little League Baseball, prodigy piano lessons, ballet, and other impositions of an adult society -- formals for nine and ten year olds, preteens prebras -- have in creating and promoting learning problems?

-- To what extent does the philosophy <u>if it's not academic it's not important</u> have upon creating learning problems and disabilities among children who are not academically oriented or receptive to teaching modalities of a given teacher or specific school system?

-- Does television, reduced play space, structural play areas with less emphasis upon creative play, and other characteristics of our modern twentieth century urban society affect overall child growth and development and contribute to learning problems and difficulties?

-- Does dictation of adult concepts and values to the child create and contribute to these very same problems? What's important in the adult world often means little if anything in a child's world!

With so many paradoxes, inconsistencies, and confusing issues, everyone interested and involved in programs and activities for children must arm themselves well to avoid falling into traps inherent in these situations. One way to avoid falling into these traps is to return to and draw upon basic concepts from anatomy, physiology, kinesiology, psychology, sociology, physics, education, growth and development -- this provides a solid foundation for sound programs, procedures, methods, and techniques. This provides teachers, leaders, parents, supervisors, and administrators with information, concepts, understandings, and appreciation so they can recognize "old wine in new bottles." When tried and true activities or techniques are simply given new and sophisticated names, a sound foundation of basic fundamentals in these and related areas permit the individual to see both forest and trees. For example --

... Does perceptual-motor activity relate to or extend basic stimulus-response principles?

... Do perceptual-motor activity and systems relate to or differ from neuromuscular principles and factors?

... To what extent are patterning (Doman-Delacato), controlling the output (Kephart), assistive therapy (physical therapists), reflexive theory (corrective therapists), and kinesthesis (physical educators) similar? Different?

... To what extent does relatively independent function of right and left cerebral hemispheres and cerebellum control of coordination explain individuals who can perform certain activities, skills, and movement patterns well, but have difficulty performing other activities, skills, or movement patterns that are similar or identical ones on the other side of the body?

... What are relationships, similarities, and differences among patterning, perceptual-motor activity, movement education, and exploration of movement?

... From a neuromuscular functional standpoint, what are differences/similarities between gross and fine motor acts? Is differentiation between gross and fine motor acts one of convenience and observation because evaluative instruments lack sufficient sensitivity to assess each accurately? To what extent is the principle that gross movements precede fine ones an overstated generalization?

... What are similarities and/or differences among movement activities conducted by physical educators, dance therapists, music therapists, occupational therapists, physical therapists, recreational therapists, corrective therapists, and optometrists?

To get at some basics to shed light on these questions we need to turn to research, empirical evidence, observations of people in the field, experience, and gut-level feelings of parents, volunteers, and paraprofessionals, as well as many involved professionals from different disciplines. Many important but overlooked, circumvented, or ignored facts from various fields are particularly relevant and need to be discussed in terms of their application and appropriateness for all children, especially those with learning problems. Since emphasis of this paper is upon physical activity, perceptual-motor, and recreation programs and activities, major considerations come from physical education and appropriate psychological literature.

Basic to developing, conducting, evaluating, and supervising many school clinic and related programs and activities for learning disabled or other children with problems or problem areas has been the process and procedure to generalize from one situation or circumstance to another. Generally this is accomplished by using a specific test, battery of tests, or other evaluative/assessment/diagnostic instruments. From results of specific tasks or test items generalizations are made about an individual's potentials, abilities, skills, capabilities, processes, faculties, and functions.

In spite of increasing test refinements, greater sophistication in administration, larger samples for determining norms, and specialists who administer tests and interpret results, many individuals do things tests say they can't while countless others can't do things they should according to test results. It appears high time that several fundamental admissions be made --

... Test results can basically be interpreted that an individual has (or has not) performed certain tasks, evidenced certain behaviors on specific tasks under a given set of circumstances and conditions, and at a particular point in time.

... Transfer and/or application of learning occurs only under specific conditions, in certain ways, with special considerations.

... Most all learning -- physical, academic, social-- is rather specific so the most fruitful approach is to concentrate on specific learning needs of individual youngsters.

... No single activity, program, method, approach, or technique can be everything to everybody. There are many ways to reach the same objective and and attain identical goals that are influenced and affected by the individualities of both learner and teacher. Greater recognition of teacher differences -- abilities, backgrounds, hangups -- have to be considered. Giving a mediocre or worse teacher fewer children in his class simply brings mediocrity and incompetence closer to the students; an alive, dynamic teacher can reach and teach large groups.

... So much in current day school operation is approached backwards -- deficiencies and deviations rather than abilities and competencies are stressed -- student achievement at the beginning rather than at the end of formal education is emphasized.

... Emphasis needs to be upon the <u>learner</u> and <u>learning</u> not the teacher and teaching. If completely honest, each will admit he never taught anyone

anything! Environment, situations, circumstances, and relationships are established whereby every student is able to learn. This makes a teacher's role/position more not less important as feared by so many who rebel and react negatively to this concept.

Throughout the country many youngsters participate actively in physical education, movement, motor activities, and perceptual-motor programs because of alleged contributions to academic development, reading achievement, mathematical prowess, writing ability, and/or general intellectual growth. For many of these youngsters the most important contributions of these programs are -- <u>they are being successful, someone is taking a special interest in them, and they are having fun</u>. As success breeds further success, greater confidence, more pride in doing a good job and in seeing a task through from beginning to end, these youngsters feel important and are willing to accept new challenges, try new activities, and explore fresh waters. Confidence in and important interpersonal relationships with teachers, leaders, counselors, buddies, parents, or others who have helped these children in these new, exciting, and fruitful experiences are vital ingredients in this process. With time many of these youngsters do gain other skills, obtain new proficiencies, and show previously unshown competencies, but not necessarily because of direct contributions of physical activities. While improved physical fitness, greater motor ability, and higher levels of physical proficiency are important and do contribute to this total process, we must be clear and accurate in assessing cause and effect relationships. Results of past research and experience do contribute to this process.

... Not too many years ago students experiencing difficulty in English were encouraged to enroll in Latin; geometry was encouraged to help develop ability to think logically, solve problems, make inferences, and exercise greater reason. Soon it was found that students needing help in English

should take additional English not Latin, and that geometry only helped develop reason, logic, and problem solving ability related to solving geometry problems!

... Correlations and other statistical relationships between so-called gross and fine motor tasks and activities have consistently been small and low!

... Relationships among various fine motor tasks and acts have resulted in lower correlations and statistical relationships than between gross and fine motor acts!

... Relationships among various gross motor activities, acts, and tasks, while somewhat higher than relationships between gross and fine motor activities, have also been relatively small and low!

... Recent investigations have shown perceptual-motor test items or tasks purported to measure the same characteristics or traits did not load on the same factor in an extensive factor analytic study.

... Basic components and characteristics of physical fitness such as muscular strength and endurance have been shown to be rather specific in terms of range and angle of motion through which they are developed.

... Reports and studies indicate that apparent relationships between components such as visual perception and perceptual-motor function have resulted because many visual perception test items require perceptual-motor functions.

... Results from other studies, research projects, empirical reports, observations, and subjective statements reenforce the point that is consistent through each of the above -- learning, whether motor/physical or cognitive/mental, is specific with transfer occurring only under specific conditions and circumstances. Generally, the most effective transfer occurs when application of principles and concepts are taught so that common elements can be used from one situation to another.

If learning is specific and transfer occurs only under special conditions, how and why are so many programs and activities for learning disabled children that emphasize motor development, movement, and physical activities so successful? As implied and stressed throughout this paper, reasons cannot be generalized to all situations and circumstances, for all children and for most teachers; just as there is no one way to guarantee success for everyone with every child, these successes reflect many splendored reasons:

... Activities are developmental in nature providing youngsters with opportunities and experiences that are in tune with their real interests, abilities, levels of development, background, experiences, as well as in terms of their culture, folkways, and mores.

... Activities provide youngsters with opportunities to succeed. Regardless of factors delineated above, every youngster can find activities in which he can succeed; emphasis is positive -- not negative, and on ability -- not disability; students are encouraged -- not dicouraged, as potential -- not deficiencies is stressed.

... Activities offer children who need a variety of experiences in terms of number, type, kind, length, and frequency to master various concepts, opportunities to apply them in other situations and circumstances. The greater the number of situations in which an individual practices and uses a concept or skill, not only does it become more deeply entrenched in his nervous system, but the more likely he will have performed it in situations where direct transfer can occur. This also emphasizes learning as a process and not as simply a means of receiving factual information.

... Activities capitalize upon the very important element -- fun. Somewhere along the line we have lost sight of the fact that learning is best accomplished with laughter, adventure, and a sense of triumph!

Put these factors all together and the child is being put back into childhood! School and related programs become relevant to interests and needs of children, not institutions that further interests, desires, and ambitions of adults. They challenge, motivate, stimulate, and become fun places where youngsters are accepted as youngsters, each for himself in terms of his own strengths, recognizing his hangups, but still as a person of worth and dignity. In a climate of this type the child looks forward to the excitement and thrill of what he is doing -- he is turned on and tuned in -- and who he is doing it with, teachers as well as classmates. Without minimizing contributions and importance of the many ways in which physical activities, perceptual-motor, and recreation programs contribute to the growth, development, good and welfare of all children, especially those with various learning problems, it appears that greatest benefits result from ways these activities and those who conduct them make each youngster feel about himself. The interpersonal relationship between student and teacher, participant and leader, camper and counselor, child and parent, resident and attendant is crucial in this process that helps each individual find himself.

Theodore Roosevelt summed it all up in a rather succinct manner when he said,

". . . The credit belongs to the man who actually is in the arena; whose fall is marred by dust, and sweat; who strives valiantly; who errs and may fall again, because there is no effort without error or shortcoming, but who does actually strive to do the deed; who does know the great enthusiasm, the great devotion; who spends himself in a worthy cause; who at best, knows in the end the triumph of high achievement, and who at the worst if he fails, at least fails while daring greatly, so that his place shall never be with those cold, timid souls who know neither victory nor defeat."

APPENDIX

ANNOTATED BIBLIOGRAPHY RELATED TO

MOVEMENT AND LEARNING

Motor Development Programs for Children with Special Needs

Prince George's County Public Schools
Spring 1974

Complied by Teachers Enrolled in In-Service Workshop in Motor Development: Implication for Learning

Bob Janus, Assistant, Motor Development

ANNOTATED BIBLIOGRAPHY INFORMATION

AAHPER, American Association for Health, Physical Education and Recreation. A practical guide for teaching the mentally retarded to swim. 1201 Sixteenth Street, N. W., Washington, D. C. 20036; 1969.

A Practical Guide for Teaching the Mentally Retarded to Swim has been developed to help fill voids in instructional and recreational swimming programs for the mentally retarded. This publication has resulted from a joint effort of the American Association for Health, Physical Education, and Recreation's Project on Recreation and Fitness for the Mentally Retarded, a part of the Unit on Programs for the Handicapped, and the Council for National Cooperation in Aquatics.

AAHPER, Foundations and Practices in Perceptual Motor Learning - A Quest for Understanding, Washington, D. C: 1971.

The material was obtained from speeches and discussions presented at a conference on "Perceptual-Motor Development: Action with Interaction held in Cincinnati, Ohio, October, 1970, sponsored by the Phy. Ed. Div., of the AAHPER. A committee for the proceedings, with the advice and consent of the Perceptual-Motor Task Force, organized the material into a format which best represented the total picture of the conference.

AAHPER, Perceptual-Motor Foundations - A Multidisciplinary Concern. Washington, D. C:, 1969.

This book is a detailed account of a Perceptual-Motor Symposium established by AAHPER. Representatives from Physical education and other disciplines first began a multidisciplinary exchange of information basic to future program implementation and research.

AAHPER, Physical Activities for the Mentally Retarded. Washington, D. C: 1968.

. . a practical answer to concern for recreation and physical education for the mentally retarded and designed for use by physical instructors of mentally retarded, classrrom teachers, parents, recreation personnel, volunteers and those involved in teacher preparation. The contents are limited to activities promoting fundamental motor development and the exploration of 3 general areas of skill: (1) net, racket and paddle activities, (2) rolling pushing, throwing and catching activities, and (3) striking and kicking activities .

AAHPER, Special Olympics. Washington, D. C: 1972.

This manual was commissioned by the Kennedy Foundation to provide a handbook for volunteers who want to organize games, team sports and recreation for special children on a year-round basis. These programs can be conducted at institutions, schools, day camps, municipal playgrounds and swimming pools, everywhere there is room to run or jump or throw a ball.

Annotated Bibliography continued.

AAHPER - The Best of Challenge. Washington, D. C: 1971.

This publication is composed of the first five volumes of Challenge, a bi-monthly newsletter dealing with physical education, recreation, camping, outdoor, education, and related areas for the mentally retarded. Materials and information are current, down-to-earth, and realistic; contents are of, for, and by the practitioner working at the grassroots level. The Best of Challenge, can contribute to the physical educator, recreation specialist, special educator, administrator, supervisor, physician, nurse, psychologist, social worker, student, professor, paraprofessional, aide, volunteer, and parent. This compilation tells what is going on in physical education and recreation for the mentally retarded. Sections are entitled Philosophy and Editorials, Activities, Programs, Facilities-Equipment-Innovative Ideas, Leadership, Books and Periodicals, Films, Cross-Country Challenges (bulletins about on-going programs), and Research. Specific sub-sections deal with such areas as Arts-Crafts-Games, Athletics and Sports, Dance, Motor Development, Music, Fitness, Swimming, Volunteer Student Activities, Adult Programs, Camping, Scouting, and Therapeutic Programs. It is hoped that The Best of Challenge will be useful regardless of the level of individuals with whom one works, the situation in which he works, the age of his charges, and his own interest, abilities and experience. Although most of the materials presented have resulted from the challenge of meeting specific problems of the retarded and handicapped, these same approaches and devices can be equally effective for nonhandicapped with similar problems who function at comparable levels.

ABERNETHY, KATHLEEN; COWLEY, JUDY; GILLARD, HAROLD and WHITESIDE, JOHN. Jumping Up and Down. San Rafael, California: Academic Therapy Publications, 1970.

This booklet is a collection of motor activities to develop balance and coordination in five to thirteen year olds. Warm up, balance, spring and landing, strengthering, cardio-respiratory endurance and flexibility activities are presented simply, with stick figures. It is very easy to use these activities confidently.

ADAMS, RONALD C; DANIEL, ALFRED N; and RULLMAN, LEE. Games, Sports and Exercises for the Physically Handicapped. Philadelphia: Lea & Febiger, 1972.

This book emphasizes the need for gross motor activities in the everyday life of the physically handicapped child and adult. Also, general characteristics of the handicapped child and medical problems encountered in the public schools and hospital settings are emphasized in order to provide understanding of the problems that are involved in regular and special physical education teaching. The authors have decided to concentrate on actual programs, procedures and equipment. Much of the material is centered chiefly on the adaptation and application to suit major group needs.

ALLEN, RALPH, et al. Physical Activities for the Mentally Retarded, Ideas for Instruction. Washington, D. C: Project on Recreation and Fitness for the Mentally Retarded and Lifetime Sports Education Project of the American Association for Health, P. E. and Recreation. 1968.

*

The basic knowledge presented in this publication is limited to activities promoting fundamental motor development and the exploration of three general areas of skills (1) net, racket and paddle activities, (2) rolling, pushing, throwing and catching activities, and (3) striking and kicking activities. These activities provides a basis for instruction with emphasis on sequential progression.

AYRES, A. JEAN. Interrelationships among perceptual-motor functions in children. American Journal of Occupational Therapy 20 (1966): 68-71.

Investigates relationships among perceptual-motor functions in a predominantly normal sample of children. A battery of 19 perceptual-motor tests was administered to 92 children between the ages of four and eight. After factor analysis, two factors emerged: one was a general perceptual-motor ability dominated by tactile, kinesthetic, and motor functions, and the second was visual perception.

AYRES, A. JEAN. Patterns of perceptual-motor dysfunction in children: A factor analytic study. Perceptual and Motor Skills 20 (1965): 335-368.

Investigates relationships among perceptual-motor functions in normal children and atypical children. A battery of 35 perceptual-motor tests was given to 100 children representing a normal school population and 50 atypical children selected on the basis of suspected perceptual deficits which were reflected in learning problems. Different factors were found for each group.

AYRES, A. JEAN. Sensory integrative processes and neuropsychological learning disabilities. Learning Disorders, edited by J. Hellmuth, vol. 3, pp. 41-58. Seattle: Special Child Publications, 1968.

Describes the following methods of sensory integrative function: (1) intersensory integration, (2) centrifugal influence, (3) modification through feed back, and (4) balancing of excitatory and depressant neural activity. Discusses the application of the theoretical sensory integrative functions to therapeutic procedures.

*ANDREWS, GLADYS. Creative Rhythmic Movement for Children. Englewood Cliffs, N. J: Prentice-Hall Inc., 1954.

Although the copyright date and pictures immediately date this publication, its ideas and concepts are very contemporary. This book provides specific suggestions and activities for the development of movement as well as a rationale for its teaching. Dr. Andrews feels rhythmic movements allow an individual to interpret thoughts and feelings through the use of his body, that when youngsters use movement as a medium of expression they become more aware of space and rhythm, and that rhythm education is fundamental to folk, social, and other dance and creative experiences.

ARENA, JOHN. Teaching Through Sensory-Motor Experiences. San Rafael, California: Academic Therapy Publications, 1969.

Compilation of articles that describe strategies for dealing with the poor development of the functionally underachieving child through sensory-motor experiences. The following subjects are discussed: Sensory-Motor Sequencing Experiences in Learning, Integrating Form Perception, Building Patterns of Retention, Hand-Eye Coordination, Laterality and Directionality, Body Image and Body Awareness, Tactile-Kinesthetic Approaches to Learning, Relating Body Awareness and Effortless Motion to Visual Training, Visual Perception and Discrimination, Tuning In, A Map in the Head, Arithmetic and Language Skills Developed Through Emphasis on Counting Sequences, Outer Space of the Inner Child.

BARSCH, RAY. Achieving Perceptual Motor Efficiency. Seattle: Special Child Publications, 1967.

Presents a detailed description of Barsch's theory and methodology for all handicapped children (learning disabilities, mentally retarded, blind and visually limited, deaf and acoustically handicapped, muscular limited, emotionally disturbed, and socially underprivileged) and the "plain-vanilla" child.

BARSCH, RAY H. Enriching Perception and Cognition. Seattle: Special Child Publications, 1968.

This second volume in the triad we have identified as a Perceptual-Motor Curriculum is a deliberate attempt to focus upon basic patterns of movement and to continue to develop and emphasize a basic theme in the full orchestration of Moviegenic theory. It is a theme which will be repeated again and again in future volumes even though the treatment will vary on occasion when particular topics receive more intensive consideration. Movement is the dominating theme of Movigenics and Space is the persisting counterpoint.

BENYON, SHEILA DORAN. Intensive Programming for Slow Learners. Columbus, Ohio: Charles E. Merrill Publishing Co., 1968.

Presents, in detail, including a day by day description of activities and procedures, a short-term intensive program for young children with learning disabilities. It covers the preparation for the establishment of such a program; provides case studies of the children in the project; contains activities; and presents the results of the project. It can serve as an example of elaboration of treatment guidelines and as an initial guide until the teacher or therapist can accumulate sufficient experience to develop his own activities.

BLANK, ELLEN M. Movement...Is for Little People K-3. St. Paul, Minnesota: Ellen Blank, 1973.

Ellen Blank has developed a physical education program for kindergarten through third grade. She feels that learning can be aided immensely through movement. Her index cards are divided into locomotor activities, non-locomotor activities, weight transference activities, and weight bearing activities. She also on her 6 by 8 inch cards has an appendix that includes games the children can play, rhythms, obstacle courses, and how to make equipment. The instructions on the cards give the major objective of the lesson, the student's experience, and teacher suggestions.

BRYANT, ROSALIE, and Oliver, Eloise McLean. Fun and Fitness Through Elementary Physical Education. West Nyack, N. Y: Parker Publishing Company, Inc., 1967.

Designed primarily to meet the physical education needs of the classroom teacher. Emphasis is placed on both the horizontal and the vertical progression of the student's learning experiences. Activities are organized in a progressive nature and the objectives of each activity are written in behavioral terms. Topics discussed include movement exploration, playground games, rhythms, and gymnastics.

CHANEY, CLARA M., and KEPHART, NEWELL C. Motoric Aids to Perceptual Training. Columbus, Ohio: Charles E. Merrill Publishing Company, 1968.

Presents basic motor and perceptual activities for training children with learning disorders. The book is broken into three basic parts. The first provides the theoretical basis for such training. The second deals with methods of evaluating the behavior. The final section describes training activities and programs.

CHRISTIAN, QUENTIN A. The Beanbag Curriculum. Wolfe City, Texas: The University Press, 1973.

Activities surrounding the use of beanbags.

CRATTY, BRYANT. Active Learning, Games to Enhance Academic Abilities. Englewood Cliffs, N. J: Prentice-Hall Inc., 1971.

Active Learning Games to Enhance Academic Abilities describes and illustrates over one hundred games for the elementary and preschool grades. It also offers modifications for using the games with the physically handicapped.

CRATTY, BRYANT. Human Behavior Exploring Educational Processes. Wolfe City, Texas: The University Press, 1971.

Dr. Cratty has attempted to cover the broad variety of human behaviors. He has succeeded in demonstrating how the verbal, intellectual perceptual, social, and movement parts of the human personality not only inter-mesh with each other, but also interact in various ways to either enhance or impede the learning process. His book covers selected Dimensions of Human Behavior, and varieties of Human Abilities.

CRATTY, BRYANT. Intelligence in Action. Englewood Cliffs, N. J., Prentice-Hall Inc., 1973.

This new, first-of-its-kind book illustrates, on a practical level, how to use movement for enhancing such intellectual abilities and language functions as: long- and short-term memory, classification and evaluation, as well as many kinds of problem-solving abilities including divergent and convergent thinking, analysis and syntheses, and flexibility and reversibility in problem solving.

CRATTY, BRYANT. Learning and Playing. Fifty Vigorious Activities for the Atypical Child. Freeport, N. Y., Educational Activities Inc., 1968.

A selection of activities on individual cards presented in an order of increasing difficulty. The equipment needed for the various activities is kept to a minimum. Activities are easily geared to various levels of competency.

CRATTY, BRYANT. Movement Activities, Motor Ability and the Education of Children. Springfield, Illinois: Charles C. Thomas, 1970.

This text outlines the methods and results of four research studies completed by postdoctoral students under the direction of the author. The topics covered in these investigations include: The effect of movement games upon various academic competencies of Negro children with learning problems in the "Central City" section of Los Angeles. Methods and results relative to impulse control. pattern recognition, serial memory ability, spelling, letter of recognition, and the like are discussed and outlined. A comparison of the self-concept of children with moderate coordination problems is made by reference to the self-concept scores by children free from coordination problems. A comparison of children with motor problems with reference to games they choose to paly, as compared to the game choices of children free of motor problems. Methods and data relative to the improvement of perceptual and motor qualities among children with minimal neurological handicaps.

CRATTY, BRYANT. Movement Activities for Neurologically Handicapped and Retarded Children and Youth. Freeport, L. I., New York: Educational Activities, Inc. 1967.

Discusses selected developmental sequences of perceptual-motor activities which will be helpful in the education of retarded and neurologically handicapped youngsters. The materials presented are intended to be only illustrative of some of the sequence which may be applied to the atypical child. The reader is urged to experiment and modify these procedures as the situation and the individual differences of the participants dictate change. Parents of, as well as, professionals concerned with learning disabled youngsters, will find this a valuable resource.

CRATTY, BRYANT. Movement, Perception and Thought. Palo Alto, California: Peek Publications, 1969.

Initially Cratty reviews contemporary research findings; discusses learning theory concepts, including a chapter on learning, motivation and transfer. The book further provides methods and techniques for teaching academic skills through the use of movement.

CRATTY, BRYANT. Perceptual-Motor Behavior and Educational Processes. Springfield, Illinois: Charles C. Thomas, 1969-70.

This book is directed toward teachers in elementary schools and in special education who wish to incorporate motor activities into their educational programs in a menaingful way. The material is research oriented and contains statements substantiated by sound research...either that of the author or of others. It also reflects the author's attempts within recent years to focus the scrutiny of the scientific method of problem solving upon the role of perceptual-motor activities in the total educational setting.

CRATTY, BRYANT. Perceptual and Motor Development in Infants and Children. New York New York: The MacMillan Company, 1970.

Presents an overview of the perception on fine and gross motor development. Describes the following topics in perception which may influence movement performance: perception of form and shape, perception of motion or movement, body-image, and self-concept. Includes a discussion and critique of these perceptual-motor training programs: Kephart, Doman and Delacato, and Getman.

CRATTY, BRYANT, and SISTER MARGARET MARY MARTIN. Perceptual-Motor Efficiency in Children. Philadelphia: Lea and Febiger, 1969.

The initial chapters contain discussions of the currently available literature linking movement with perceptual and intellectual skills. The final chapters contain rationale and practices helpful to the classroom teacher. Included are discussions of and activities for development of strength, flexibility, endurance, improvement of large muscle control, self-confidence, and body-image.

CRATTY, BRYANT J. Psychology and Physical Activity. Englewood Cliffs, N. J: Prentice-Hall, Inc., 1968.

Written for professional people in athletics, physical education and recreation. Provides them with a distillation of current research findings in psychology which are pertinent to the teaching and coaching of physical activities. It is a fine reference to the extensive literature in the field to the guidelines being established through the behavioral sciences for motor performance and motor learning. A well documented sequence of clear statements representing current psychological thought on various aspects of movement activity is given. The findings are from experimentation and from the field proven. The material of this study covers the following: response characteristics of the performer, motivation-activation-arousal, perception, group interactions, maturation, learning, inferior and superior performers.

CRATTY, BRYANT J. Social Dimensions of Physical Activity. Englewood Cliffs, N. J: Prentice Hall Inc., 1967.

The topics covered in this book demonstrate the wide scope of its application: Appearance, Performance, and Sociality. Aspiration Level. Group Interaction. Competition-Cooperation, Leadership, Status and Physical Activity. Physical Activity and the Social Attributes of Infants, Children and Adolescents. The Audience, The Family, The Author's aim is to stimulate scholars of human movement to engage in a rational approach when relating social objects and influences to fluctuations in motor performance and motor learning. Concepts to stimulate further investigations are given along with summaries of available research.

CRATTY, BRYANT. Some Educational Implication of Movements. Seattle, Washington: Special Child Publications, Inc., 1970.

Some of the current theories of movement experience are critically examined, using data from research laboratories throughout the country as much as possible. Positive suggestions for the improvement of children through movement are provided. Divided into four sections: Movement, Intelligence and Perception; The Nature of Movement Behavior; Movement Behavior and the Education of Children: and The Use of Motor Activities in the Education of the Atypical Child.

DAUER, VICTOR P. Dynamic Physical Education for Elementary School Children. Minneapolis, Minnesota: Burgess Publishing Company, 1962.

Dynamic Physical Education for Elementary School Children actually represents the second revision of Fitness for Elementary School Children Through Physical Education, by the same author. It is a detailed guide to dynamic movement education and perceptual motor training, in conjunction with a much broader physical education program, or developing ideas for structured, limited space activities. Whether emphasis for individuals or groups is on rugged fitness, basic skills and movement experience, or the integration of a physical education program with other subjects, the author presents a variety of new approaches needed for today's children and youth. The teacher's role in effective planning and executing a program of physical development, is clearly outlined for numerous activities, applicable for presentation at each grade level. Finally, the expressed conviction, that good programs are not a casual happening is repeated throughout and efforts must be extended toward physical fitness as a primary goal.

DAUER, VICTOR P. Essential Movement Experiences for Preschool and Primary Children. Minneapolis, Minnesota: Burgess Publishing Company, 1972.

This book contains additional material for pre-school that further extends the range of experiences at the pre-school and primary level. In assembling learning experiences for preschool children, it was evident that much flexibility should be incorporated in the approach, and the presentation reflects this posture. First, a broad program of physical education should be the right of each child, with emphasis on rugged and demanding activities. Children need to be challenged if they are to move along the path of development. Enough physical education materials are available in this text so that a variety of learning experiences can be presented on each grade level.

DORAY, MAYA B. See What I Can Do! Englewood Cliffs, N. J: Prentice-Hall Inc., 1973.

The book is structured to answer a child's need for purposeful yet unconstricted movement experiences. In essence it is a systemically-balanced-movement class, designed for movement awareness, fundamental physical education, creativity and self-expression. The movement range includes warm-ups; and activities to improve coordination, balance, flexibility and muscle tone.

EARLY, GEORGE H. Perceptual Training in the Curriculum. Columbus, Ohio: Charles E. Merrill Publishing Company, 1969.

Presents curriculum projects and units of study to illustrate how the theory of perceptual training and the principles of curriculum modification work together. Sample units include: Fifth-grade social studies projects, First grade language arts units, elmentary science unit for educable retarded children and industrial arts unit on small gasoline engines for a class of teen-aged educable retardates.

EDUCATIONAL RESEARCH COUNCIL OF AMERICA. Physical Education Program. Columbus, Ohio: Charles E. Merrill Publishing Company, 1969.

Packaged in convenient kit form, the Educational Research Council of America Physical Education Program consists of 800 programmed physical education activities, each completely outlined on portable, five-inch by eight-inch cards. There is an almost endless variety of productive activities that comprise a developmental sequence of learning experiences. Within seconds a teacher can choose from a vast source of activities divided into games, rhythms, elementary gymnastics, physical fitness, and evaluation. To coordinate the program there is a comprehensive Program Guide. Included are teaching methods, lesson planning, order and discipline techniques, basic class formations, adaptations for the physically handicapped, a safety check list and evaluation methods.

ECKLERS, WALTER H. D. S. W. Mothers of Retarded Children How They Feel, Where They Find Help. Springfield, Illinois, 1966.

This book presents a research study of twenty four mothers of mentally retarded children. This study was conducted in the Cambridge Service for Retarded Children. This study attempted to discover how the mothers learned that their children were retarded and how they went about seeking help. The first chapters describes the research problem, the method used in obtaining information and the effect that such child has on the family in which he lives. Chapters VIII and IX describes the services that are available and prospects for the future.

EPPS, HELEN O., McCAMMON, GERTRUDE B., and SIMMONS, QUEEN D. Teaching Devices For Children With Impaired Learning. Columbus, Ohio: Parents Volunteer Association of the Columbus State School, Inc., 1964.

Presents the educational program of Research Project 50 at the Columbus State School which is concerned with the psychological and educational study of mentally deficient children whose medical diagnosis points to an etiology of brain injury. The children were divided into groups with the following disabilities visual-somantic, visual-autonomic, auditory-somantic, and auditory-autonomic. Teaching techniques are specifically organized and described utilizing commerically available materials for each of the above mentioned groups. Sources and addresses of the materials discussed are provided.

FROSTIG, MARIANNE. Movement Education, Theory and Practice. Follett Educational Corporation, Chicago: 1970.

This book presents a program for teaching movement skills and developing creative movement to enhance the total development of young children - their physical and their psychological abilities, their ability to learn, their ability to get along with one another, their feelings about themselves, and their relationship to the environment.

FROSTIG, MARIANNE, and MASLOW, PHYLLIS. MGL Move, Grow, Learn. Chicago. Follett Educational Corporation, 1969.

This program is based on material in Movement Education: Theory and Practice by Marianne Frostig. Movement Education was written for this program. The exercises on the cards are taken from that book. The exercises involve a comprehensive grouping of some 160 activities and procedures which help develop movement skills, creativity, and body awareness. In the guide, educators will find background material on movement education and practical suggestions for conducting the program.

GITTER, LENA L. The Montessori Way. Seattle, Washington: Special Child Publications, Inc., 1970.

Attempts to be a thorough basic guide for anyone concerned with the special child--teachers, psychologists, therapists, parents--in regards to the Montessori way. It gives the essentials of Maria Montessori's philosophy of the child and his development; views that the findings of modern psychology have confirmed. Exercises which Maria Montessori introduced, those of some of her early followers and some of the author's own are offered to the reader. All exercises which would require special training have been eliminated, thus making this text the only background needed for the utilization of the exercises and materials therein.

HACKETT, LAYNE C., and JENSON, ROBERT G. A Guide to Movement Exploration. Palo Alto, California: Peek Publications, 1966, 1967.

The book provides elementary school teachers with the information to enable them to implement movement exploration programs, even if said teachers have had little orientation toward physical education. With the explanations of movement exploration and sample lesson plans the teacher should be ready to experiment with the concept of movement exploration. Further the book provides weekly and then progresses to a yearly plan for children from kindergarten through sixth grade. Still further it gives activities to get at physical characteristics of motor development. Activities center around the use of inexpensive equipment. The teacher's individual personality and the spontaneity and eagerness to explore the potentials of movement exploration of the student make the exploration of movement exciting.

HARVAT, ROBERT W. Physical Education for Children with Perceptual-Motor Learning Disabilities. Columbus, Ohio: Charles E. Merrill Publishing Co., 1971.

This book is an addition to the set. The Slow Learner Series edited by Newell C. Kephart. This would serve as a very handy reference for sequential perceptual motor tasks on a primary level. It would also be a valuable guide for aides and paraprofessionals in learning the theory behind specific perceptual motor techniques.

HUMPHREY, JAMES. Teaching Slow Learners Through Active Games. Springfield, Ill.; Charles C. Thomas, 1970.

The material presented here by the authors represents a very real advance in dealing with slow learning children. The book is based on the concept that slower learning children will learn better when the learning takes place in a pleasurable active situation rather than in traditional abstract learning situations. Thus, the learning of academic skills and concepts becomes a part of the child's physical reality. The value of this type of learning experience for slow learners is obvious because of the fact that they deal better with pleasurable concrete experience that they do with abstract situations.

KEPHART, NEWELL C. The Slow Learner in the Classroom. Columbus, Ohio: Charles E. Merrill Co., 1960.

The book is written for the classroom teacher with a few pupils in her class who never seem quite able to learn what others are learning readily and eagerly. One part of the book is devoted to a description of some of the major learning areas in the development of the pre-school child. The child who lacks readiness skills will find a large number of school tasks impossible. The second part aids in identification of children lacking in basic learning skills. The third part gives clinical methods by which pre-readiness skills can be taught. Development of readiness skills will make academic achievement possible. The slow learner who achieves readiness by early attention to the need of readiness, he has a good chance of continued learning through the customary activities of the group.

KLASEN, EDITH. Audio-Visuo Motor Training with Pattern Cards. Palo Alto, Calif., Peek Publications, 1969.

The emphasis of the Audio-Visuo Motor Training Program as presented through this manual and the Pattern Cards, is designed to insure the simultaneous utilization of as many avenues of learning as possible. The basis of this principle is discussed in detail in Chapter 2. The following topics discussed are: the usefulness of the pattern cards for the development skills in cases of constitutional neurosensory dysfunction; developing visuo motor facilities for the child whose neurosensory functions show a developmental or maturational lag. Included is a glossary of terms used throughout the manual.

LATCHAW, MAJORIE, and EGSTROM, GLEN. Human Movement. Englewood Cliffs, N. J: Prentice Hall Inc., 1969.

This is a book that up-dates the quality of materials available for the physical education program in the elementary school. Its main concern is the conceptual development of the child, through understanding human movement and biological development. By interpreting knowledge in this field into physical education activities for the child, it provides the teacher with a source of new ideas and helpful examples.

*

MOUROUZIS, ANN, WEMPLE, DONNA, and WHEELER, JAMES. Body Management Activities A Guide to Perceptual Motor Training. Cedar Rapids, Iowa: Nissen Company, 1970.

Body Management Activities is a guide which I wish to purchase for my personal use to gain to insights in setting up a motor development program in the classroom. The layout of this is particularly helpful. Each chapter briefly discusses a basic concept, then presents a section about detecting the problem, provides ample teaching hints to remediate the difficulty and provides useful follow-up activities Appendix A contains a glossary, appendix B contains an annotated bibliography - appendix C contains sample work sheets.

*MILLER, ARTHUR. Physical Education in the Elementary School Curriculum. Englewood Cliffs, New Jersey: Prentice Hall Inc., 1969.

This book presents an in depth view on movement exploration with emphasis placed on principles and teaching techniques. There are sections that deal primarily with movement fundamentals related to gymnastics, ball activities, and dancing.

PADALINO, JANE P. DR. Title III Perceptual Training Activity Kit #2. Union, N. J., Dept. of Student Personnel Services-The Union Township Schools,

A continuation of Kit #1 alphabetically listing (from "R" to the end of the alphabet) innovative activities for the identification and remediation of Perceptual Deficiences in Kindergarten and Primary Grade Students. The Kit contains the following categories and accompanied activities: rhythmic activities, sequencing, shape: concept recognition, size discrimination, spatial relationships, stimulus response-automatization, strength and flexibility, tactile stimulation, taste and smell stimulation, time concept, verbal concept, visual concept, visual discrimination, visual memory, visual motor match, visual tracking, words-concept recognition. Kit #2 also includes an Index to Activities for both Kits #1 and #2 and an index to Equipment and Names of Supply Companies.

REGAN, PAUL R. Physical Education for the Handicapped through a Recreation Program of Remedial Sports and Social Activities. 1966.

Presents a synopsis of recreational activities which lend themselves to the optimum physical fitness of handicapped people, young and old. He touches upon various aspects of each activity, e. g., safety factors, physical benefits, and recreational application. Also included is a comprehensive glossary of terms dealing with the handicapped.

SULLIVAN, DOROTHY and HUMPHREY, JAMES. Teaching Reading Through Motor Learning. Springfield, Illinois, 1973.

The authors, Sullivan and Humphrey, have collaborated in an effort to view the interrelated aspects of both developing children physically and the educating of children through physical activities. They suggest specific concepts, teaching procedures and the application of the motor learning theory as it relates to the various aspects of developing reading skills and diagnosing reading achievement. Evidence is provided in support of their theoretical perspectives, which encourage and emphasize the influence of motor-oriented learning for children.

THOMAS, RONALD and MOOSE, JANE. MOVEMENT: The first step to learning. Fayetteville, Arkansas: Northwest Arkansas Supplementary Education Center.

UNION PUBLIC SCHOOLS. Perceptual Training Activities Kit. Union, New Jersey: Union Township Public Schools.

Provides training techniques and activities designed to prevent or minimize learning disabilities in kindergarten and primary grade children. Activities are alphabetically arranged in card catalogue manner under such headings as auditory concept, discrimination, memory, and motor: visual concept, discrimination, memory, motor; and tracking; balance; body identification; coordination; figure ground; language development; number concept; plus many more skills. Also includes list of equipment, supplies, and materials useful in these activities.